

Los Angeles Regional Water Quality Control Board

October 21, 2015

Permittees of the Upper Los Angeles River Watershed Management Group¹
(See Distribution List)

REVIEW OF THE UPPER LOS ANGELES RIVER WATERSHED MANAGEMENT GROUP'S DRAFT ENHANCED 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)

Dear Permittees of the Upper Los Angeles River Watershed Management Group:

The Los Angeles Regional Water Quality Control Board (Los Angeles Water Board or Board) has reviewed the draft Enhanced Watershed Management Program (EWMP) submitted on June 25, 2015 by the Upper Los Angeles River Watershed Management Group (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 an EWMP to implement the requirements of the Los Angeles County MS4 Permit on a watershed scale through customized strategies, control measures, and Best Management Practices (BMPs). Participation in an EWMP is voluntary.

The purpose of an EWMP is for Permittees 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. Additionally, an EWMP comprehensively evaluates opportunities, within the participating Permittees' collective jurisdictional area (within the Watershed Management Area), for collaboration among Permittees and other partners on multi-benefit regional projects that, wherever feasible, retain all non-storm water runoff and all storm water runoff from the 85th percentile, 24-hour storm event for the drainage areas tributary to the projects, while also achieving other benefits including flood control and water supply.

¹ Permittees of the Upper Los Angeles River Watershed Management Group EWMP include the Los Angeles County Flood Control District; the County of Los Angeles; and the cities of Alhambra, Burbank, Calabasas, Glendale, Hidden Hills, La Cañada Flintridge, Los Angeles, Montebello, Monterey Park, Pasadena, Rosemead, San Fernando, San Gabriel, San Marino, South El Monte, South Pasadena, and Temple City.

If Permittees opt to develop an EWMP, the EWMP must meet all requirements of Part VI.C (Watershed Management Programs) of the LA County MS4 Permit. This in part, requires Permittees to include multi-benefit regional projects to ensure that MS4 discharges achieve compliance with all final WQBELs set forth in Part VI.E and do not cause or contribute to exceedances of receiving water limitations. An EWMP must be approved by the Los Angeles Water Board, or by its Executive Officer on behalf of the Board.

As stated above, on June 25, 2015, the Group submitted a draft Enhanced Watershed Management Program (EWMP) for their entire jurisdiction to the Los Angeles Water Board pursuant to Part VI.C.4.c.iv of the LA County MS4 Permit.

Public Review and Comment

On July 1, 2015, the Board provided public notice and a 61-day period to allow for public review and comment on the draft EWMPs. A separate notice of availability regarding the draft EWMPs was directed to State Senators and Assembly Members within the Coastal Watersheds of Los Angeles County. The Board received three letters that contained comments specific to the Group's draft EWMP. These letters were from the Construction Industry Coalition on Water Quality; Ms. Joyce Dillard; and the Natural Resources Defense Council, Los Angeles Waterkeeper, and Heal the Bay (jointly). On July 9, 2015, the Board held a workshop at its regularly scheduled Board Meeting on the draft EWMPs. During the review of the draft EWMPs, the Los Angeles Water Board considered those comments applicable to the Group's draft EWMP.

The Los Angeles Water Board has reviewed the draft EWMP and has determined that, for the most part, the draft EWMP includes the elements and analysis required in Part VI.C of the LA County MS4 Permit. However, some revisions to the Group's draft EWMP are necessary. The Los Angeles Water Board's comments on the draft EWMP, including detailed information concerning revisions to the RAA, are found in Enclosure 1 and Enclosure 2, respectively. The LA County MS4 Permit includes a process through which necessary revisions to the draft EWMP can be made (Part VI.C.4 in the LA County MS4 Permit). The process requires that a final EWMP, revised to address Los Angeles Water Board comments identified in the enclosures, must be submitted to the Los Angeles 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 EWMP as identified in the enclosures to this letter and submit the revised EWMP as soon as possible and no later than **January 21, 2016**.

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

If the necessary revisions are not made and the Group does not ultimately receive approval of its EWMP within 40 months of the effective date of the LA County MS4 Permit, the Group will be subject to the baseline requirements in Part VI.D 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 L pursuant to subparts VI.E.2.d.i.(1)-(3) and VI.E.2.e.i.(1)-(3), respectively.

Until the draft EWMP is approved, the Group is 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);
- (c) Target implementation of watershed control measures in (a) and (b) above to address known contributions of pollutants from MS4 discharges to receiving waters; and
- (d) Where possible, implement watershed control measures, from existing TMDL implementation plans, to ensure that MS4 discharges achieve compliance with interim and final WQBELs and receiving water limitations pursuant to Part VI.E and set forth in Attachments L through R by the applicable compliance deadlines occurring prior to approval of an EWMP.

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, Storm Water Permitting, at Ivar.Ridgeway@waterboards.ca.gov or by phone at (213) 620-2150.

Sincerely,



Samuel Unger, P.E.
Executive Officer

Enclosures: Upper Los Angeles River Watershed Management Group Distribution List
Enclosure 1 – Comments and Necessary Revisions to Draft EWMP
Enclosure 2 – Comments on the Reasonable Assurance Analysis

Los Angeles Regional Water Quality Control Board

Enclosure 1 – Summary of Comments and Necessary Revisions to Draft EWMP

Upper Los Angeles River EWMP Group

EWMP Reference	MS4 Permit Provision	Comment and Necessary Revision
Water Body Pollutant Classification		
(1) Section 3	Part VI.C.5.a	<p><u>Water Body-Pollutant Combinations</u> Revise Section 3 of the draft EWMP:</p> <ul style="list-style-type: none"> • Include the Water Body-Pollutant Categories summary tables from Appendix 3.A (i.e. Tables 3-6) in the main EWMP document; • List the applicable interim and final WQBELs and receiving water limitations for each identified Category 1, 2, and 3 pollutant.
(2) Section 3, Table 3-5, Table 3-6, and Appendix 3.A	Part VI.C.5.a	<p><u>Compliance Schedule for Dioxin</u> Revise the dry weather and wet weather compliance schedules for 2, 3, 7, 8-TCDD (dioxin) in LA River Reach 3 and Burbank Western Channel.</p> <p>The compliance schedules for these water body-pollutant combinations should reflect the 2024/2028 compliance schedule given to dioxin in LA River Reach 6 (Table 14).</p>
Selection of Watershed Control Measures		
(3) Section 4.3	Part VI.C.5.b	<p><u>Relative Capacities of Control Measures:</u> Address the following inconsistency in Section 4:</p> <ul style="list-style-type: none"> • Section 4-3 states that “as shown in Figure 4-3, regional projects on public land make up 26% of the total control measure capacity in the EWMP. Regional projects on private land make up an additional 31% of the EWMP capacity.” However, Figure 4-3 lists regional BMPs on public land as 29% of the relative capacity (by adding Very High, High, and Medium projects) and regional BMPs on private land as 27% of the relative capacity. The Group must clarify this discrepancy. • Include the relative capacities and number of public and private regional projects needed for the 2037 compliance date (as opposed to only discussing the 2028 compliance

EWMP Reference	MS4 Permit Provision	Comment and Necessary Revision
		<p>date).</p> <ul style="list-style-type: none"> Figure 4-3 must indicate the estimated acreage required for projects that comprise the "Regional BMPs (private)" control measure category in lieu of the number of projects provided for other Regional BMPs categories.
(4) Section 4.3 and Section 7.2	Part VI.C.5.b	<p><u>Regional Projects on Private Parcels</u> In the Group's EWMP Implementation Strategy, regional projects on private parcels make up 31% of the control measure capacity to be implemented by 2028. Furthermore, as noted in Figure 7-4, additional regional projects on private parcels are needed for final EWMP compliance in 2037.</p> <p>The Group needs to elaborate on the feasibility of such a strategy and detail its process for implementing these BMPs. The Group must explicitly describe any difficulties or issues that may be faced with this strategy and these types of projects.</p> <p>Furthermore, in the case where implementing the number of regional projects on private parcels as indicated in the EWMP Implementation Strategy is found to be infeasible, the Group shall identify potential alternative approaches that it can pursue and consider the following:</p> <ul style="list-style-type: none"> Are regional projects on private parcels (to the extent identified in the EWMP Implementation Strategy) ultimately necessary to achieve load reductions in the watershed? Are there scenarios where the 31% implementation number can be reduced to a lower percentage of the EWMP's control measures (e.g. 10%, 20%, etc.)? And if so, what would be the change in implementation costs?
(5) Section 4.5	Part VI.C.5.b	<p><u>Signature Regional Projects</u> The Group must include the following additional information on the listed signature regional projects:</p> <ul style="list-style-type: none"> Provide milestones and timelines for each project; Include the rainfall depth (in inches), rainfall volume, and storm water runoff volume associated with each project; Identify the responsibilities of each participating Permittee for each project; Clarify and/or correct the signature project fact sheets for Freemont Park and Sierra Vista Park (Figures 4-13 and 4-20), which appear to incorrectly list the Design Storm

EWMP Reference	MS4 Permit Provision	Comment and Necessary Revision
		Event for these projects as "85 th Percentile, 24 hr."
(6) Section 5.3	Part VI.C.5.b	<p><u>Green Streets</u> The "green street volume utilization" is either 50-75% or 75-100% in many areas within the watershed. The Group needs to elaborate on the feasibility of achieving such percentages within the watershed and describe any difficulties or issues that may be faced with implementation.</p> <p>In the program highlights box (pg. 5-5), the Group notes that "[d]ata limitations currently hamper decision making." The Group must elaborate on these limitations and how these limitations will be addressed.</p>
(7) Section 7.5	Part VI.C.5.b	<p><u>Additional Institutional Control Measures</u> Revise Table 7-4 to include milestones and dates for achievement for the following controls measures</p> <ul style="list-style-type: none"> • Train staff to facilitate LID and Green Streets implementation • Adopt Sewer System Management Plan (SSMP) • Incentives for irrigation reduction practices • Encourage retrofitting of downspouts (downspout disconnect) • Refocused outreach to target audiences and water quality priorities <p>Additionally, address concerns related to the following control measures:</p> <ul style="list-style-type: none"> • Adopt Sewer System Management Plan (SSMP): Most public agencies that own/operate sanitary sewer systems should be enrolled under the Waste Discharge Requirements for Sanitary Sewer Systems, and should have already adopted and be implementing an SSMP. The EWMP should remove the listing of this as an additional institutional control or it must clearly demonstrate why these specific agencies should get credit for their SSMPs. • Incentives for irrigation reduction practices: Detail whether the City of South Pasadena is doing anything beyond the Metropolitan Water District program and provide rationale why the city should specifically get credit for an additional institutional control measure (as compared to other EWMP Group Members that are Member Agencies).

EWMP Reference	MS4 Permit Provision	Comment and Necessary Revision
(6) Section 7.4	Part VI.C.5.b	<p><u>Non-Stormwater Strategy and Control Measures</u> Include additional information on the Group’s dry-weather strategies:</p> <ul style="list-style-type: none"> • Clarify whether the elimination of non-stormwater flows includes authorized and exempt non-stormwater discharges through the MS4. • Clarify how the non-stormwater elimination will be achieved as indicated in Figure 7-25 and Figure 3-2 of Appendix 6.B. It is unclear if the 100% reductions for the 2037 compliance date are solely based off of routing the dry weather runoff time series through the EWMP Implementation Strategy’s BMP network. The Group should clearly state any assumptions it is making for this 100% reduction projection.
Enhanced Watershed Management Program Provisions		
(7) Section 4.4	Part VI.C.1.g	<p><u>Retention of NSW runoff and 85th percentile:</u> The Group identifies which of the signature regional projects are able to retain the 85th percentile, 24-hour storm event.</p> <p>For the remaining regional projects, clarify in Section 4.4 and/or Appendix 4.B when the Group will determine which projects will be able to retain all non-storm water runoff and the 85th percentile, 24-hour storm. It is acceptable to identify this in the future as part of the Group’s general design and engineering analyses; however the EWMP must at least specify this.</p>
(8) Section 9.2		<p><u>EWMP Implementation Costs</u> Clarify how the estimated EWMP implementation costs for regional projects are divided among Permittees—e.g. are costs split percentage-wise based on contributing drainage areas?</p>
(9) Section 9.3	Part VI.C.1.g.ix	<p><u>Financial Strategy</u> The Group’s financial strategy must be revised to provide more specific information:</p> <ul style="list-style-type: none"> • The Group states that “[t]he EWMP Group as a whole, as well as individual Group members are currently prioritizing and selecting the specific financing strategies that best fit their needs.” The revised EWMP must include this prioritization and selection of specific financing strategies, or provide a timeframe for completing the prioritization and selection of specific financing strategies.

EWMP Reference	MS4 Permit Provision	Comment and Necessary Revision
		<ul style="list-style-type: none"> • The Group needs to provide more detail on the potential funding sources listed in Sections 9.3.1 through 9.3.3. The Group should evaluate the challenges, potential, and feasibility of securing each potential funding source. Furthermore, if possible, the Group should also quantify the funding available from each source. • The Group identifies components of a “Stormwater Program Financial Plan,” including: Implementation of New Fee or Charge, Establishment of New Enterprise Fund, Cash and Debt Financing, Operating and Capital Reserves, and Cash Flow Modeling. The revised EWMP must include an update on what progress the Group has made on achieving these identified financial plan components. • The Group should specify sources of funding for signature regional projects and other near-term projects. If no funding is in place, the Group should identify their process for securing this funding.
(10) Appendix 4.B		For the Appendix C (Optimization Results by TetraTech) to Appendix 4.B, provide a definition for the term “PDR” used in the <i>Summary of Recommended Solutions</i> tables.
Reasonable Assurance Analysis (RAA)		
(11) Section 6.2.5.1 and Figure 6-6	Part VI.C.5.b.iv.(5)	<p><u>90th Percentile Exceedance Volume</u> The critical condition used for metals is the 90th percentile Exceedance Volume. The Group must add further clarification regarding this critical condition:</p> <ul style="list-style-type: none"> • Provide detail on how the Exceedance Volumes were calculated. Explain whether actual or modeled flows and concentrations were used for these calculations. • Provide detail on how Exceedance Volumes are used in defining average conditions for interim limitations.
(12) Sections 7.1, 8.1., and 8.2		<p><u>EWMP Implementation Strategy Compliance</u> In explaining its EWMP Implementation Strategy, the Group states:</p> <p>“the network of control measures that provides reasonable assurance of achieving the Compliance Targets is referred to as the EWMP Implementation Strategy. The identified BMPs (and BMP preferences) will likely evolve over the course of the EWMP Implementation through an adaptive management paradigm and in response to “lessons learned.” As such, it is anticipated the BMP capacities within the various subcategories will be</p>

EWMP Reference	MS4 Permit Provision	Comment and Necessary Revision
		<p>reported to the Regional Board but not tracked explicitly by the Regional Board for compliance determination. As BMPs are substituted over the course of EWMP implementation (e.g., replace green street capacity in a subwatershed with additional regional BMP capacity), the Group will show equivalency for achieving the corresponding Compliance Target.”</p> <p>Give further detail on how equivalency will be calculated and determined and what kind of information will be provided to show equivalency. In addition, provide example calculations or methodology to go along with the scenarios described in Section 8.2.4.</p>
(13) Section 7, Appendix 7.A, and Appendix 7.C		<p><u>EWMP Implementation Plan and Strategy for Lakes</u> It isn't clear which subwatershed IDs in the EWMP Implementation Plan (Appendix 7.A) are associated with Lake Calabasas, Echo Park Lake, and Legg Lake. Furthermore, the EWMP Implementation Strategy (as presented in Figures 7-5 through 7-21 and Appendix 7.C) does not appear to include control measure scheduling for these lakes. Revise these sections to address these water bodies. As noted in the EWMP, these water bodies are subject to TMDLs.</p>
Other		
(14) Appendix 6H		<p><u>Miscellaneous</u> Clarify the following:</p> <ul style="list-style-type: none"> • Page 6.H.4 appears to have been inadvertently added to the EWMP (e.g. Table 6H-1).

Los Angeles Regional Water Quality Control Board

Enclosure 2 – Summary of Comments and Necessary Revisions for the Reasonable Assurance Analysis (RAA)

**Upper Los Angeles River
Enhanced Watershed Management Program (EWMP)**

Prepared by: C.P. Lai, Ph.D., P.E.

This memorandum contains the comments on Section 6, Report of Reasonable Assurance Analysis (RAA) in the draft Enhanced Watershed Management Program (EWMP) for the Upper Los Angeles River Watershed Management Group dated June 2015.

1. The model results of hydrology calibration as shown in Table 6-1 indicated that the difference between modeled and observed values of annual storm volume is 22.9% for the LA River at Wardlow Avenue, while the difference between modeled and observed values for the highest 10% of flows is -21.1% for Santa Anita Wash and 20.4% for Compton Creek. Provide additional discussion regarding these differences – i.e., the over-prediction of annual storm volume in the LA River at Wardlow and in Compton Creek, and the under-prediction of the highest flows in Santa Anita Wash.
2. Explain the difference between the scale of normalized streamflow (e.g., Figure A-12 and similar figures) and the x-axis and y-axis scales of modeled and observed streamflow in the regression graph for the same stream gage.¹
3. For water quality calibration, the differences in modeled and observed values for total zinc, total lead and E. coli are -27.7%, -32.5% and -32.1%, respectively. Provide additional discussion regarding the error between modeled and observed values for total zinc, total lead, and E. coli and potential explanations for the under-prediction of the modeled load relative to the observed load. Further, identify the data needed to improve model calibration for total zinc, total lead, and E. coli and include a commitment to collect the necessary data to refine the RAA through the CIMP and adaptive management process.
4. For zinc and other metals, the critical condition is defined as the 90th percentile Exceedance Volume (EV) as explained in Section 6.2.5.1. Board staff understands that this EV approach provides assurance that the receiving water limitations (RWLs) will be met instream. Please also provide a comparison of the EV by subbasin with the 90th percentile of pollutant (zinc) load to demonstrate that the EV approach is protective relative to other metrics including the 90th percentile pollutant load.

¹ Note that many of the text references to tables and figures in Appendix 6.A are not properly linked to the table or figure (i.e., "Error! Reference source not found" was observed in several places throughout the appendix). Please correct.

5. In addition to the EV statistics, please also provide the model results of the baseline condition in terms of runoff volume, pollutant concentration, and pollutant loadings based on the 90th percentile critical condition of runoff volume and pollutant concentration at each subbasin for each limiting pollutant. In addition, please provide the estimated allowable loads and required load reductions on a pollutant-by-pollutant basis.

Although the pollutant concentration for metals, fecal coliform, and total phosphorous are provide in Appendix 6.A for Model Calibration and Parameters, the 90th percentile of the modeled concentrations for each pollutant should be included in the same graph of the model results as shown in Figure A-22 through Figure A-27 in the Appendix 6.A or pollutant concentration duration curves for all required pollutants should be provided instead.

6. In the report, a summary statistic of percent reduction is provided as shown in Table 6.D-4, however some numbers used to arrive at calculating the percentage are not easily identifiable. Provide the model results for the proposed control measures and potential BMPs to demonstrate the effectiveness of the proposed BMPs relative to the required pollutant load reductions and load reduction goals.
7. Finally, please provide an example validation for a representative waterbody within the ULAR or in another EWMP area where a similar RAA approach is being used that demonstrates that with all proposed BMPs in place, as determined from the initial analysis of the necessary volume and/or pollutant load reduction, the RWLs will be achieved.