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ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

October 17, 2018

Permittees of the Rio Hondo / San Gabriel River Water Quality Group[1]
(See Distribution List)

REVIEW OF THE RIO HONDO / SAN GABRIEL RIVER WATER QUALITY GROUP'S PROPOSED REVISED 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 Rio Hondo / San Gabriel River Water Quality Group:

On April 21, 2016, the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board or Board) approved the Rio Hondo / San Gabriel River Water Quality Group (Group) Enhanced Watershed Management Program (EWMP).

On March 30, 2018, the Group submitted a Revised EWMP ("Proposed EWMP") for Los Angeles Water Board approval that includes extensive and significant requested modifications to the Group's current EWMP, including a revised Reasonable Assurance Analysis, changes to watershed control measures, and changes to compliance schedules. Additionally, the Proposed EWMP does not include the City of Azusa as a participating member.

Public Review and Comment

On May 23, 2018, the Board provided public notice and a 30-day period to allow for public review and comment on the Proposed EWMP. The Board received two letters that contained comments specific to the Group's Proposed EWMP. These letters were from Natural Resources Defense Council, Heal the Bay, and LA Waterkeeper (jointly) and the City of Duarte, which is a member of the Group.

The Los Angeles Water Board has reviewed the Proposed EWMP and has determined that some revisions are necessary. The Los Angeles Water Board's comments on the Proposed EWMP, including detailed information concerning the RAA, are found in Enclosures 1 and 2.

Please address the comments and/or make the necessary revisions to the Proposed EWMP as identified in the enclosures to this letter as soon as possible and no later than **December 17, 2018**.

[1] Permittees of the Rio Hondo / San Gabriel River Water Quality Group EWMP include Cities of Arcadia, Azusa, Bradbury, Duarte, Monrovia, Sierra Madre, the County of Los Angeles, and the Los Angeles County Flood Control District (LACFCD).

The updated Proposed EWMP must be submitted to losangeles@waterboards.ca.gov with the subject line "LA County MS4 Permit – Revised Rio Hondo / San Gabriel River Water Quality Group EWMP" with a copy to Ivar.Ridgeway@waterboards.ca.gov and Chris.Lopez@waterboards.ca.gov.

Until a new EWMP is approved, the Group shall continue to implement its current 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,

for Deborah J. Smith
Executive Officer

Enclosures: Rio Hondo / San Gabriel River Water Quality Group Distribution List
Enclosure 1 – Comments and Necessary Revisions to Draft EWMP
Enclosure 2 – Comments on the Reasonable Assurance Analysis

Enclosure 1

Comments on Revised Rio Hondo/San Gabriel River Water Quality Group EWMP

EWMP Reference	MS4 Permit Provision	Comment
General		
-	-	The City of Duarte submitted a comment letter dated June 22, 2018, which raises issues with the Revised EWMP and states that the "Duarte City Council has not approved the submittal of the revised EWMP on its behalf as a final document, and the City respectfully requests that the Regional Board not approve the revised EWMP as a final document, unless and until all of the above referenced questions have been addressed." The Los Angeles Water Board cannot approve the Revised EWMP given the City of Duarte's issues with the program that itself, as a member of the Group, is proposing. Two of the four Regional BMPs proposed in the Revised EWMP—Basin 3E and Encanto Park—are projects involving the city. The Group must review the issues that the City of Duarte and any other members have with the Revised EWMP. Although the litigation issues raised by the city are outside the scope of the EWMP, the concerns raised by the city regarding its own involvement should be resolved.
Main Document		
Section 5, Enhanced Outcomes	Part VI.C.5.b.iv. (4)	The Group should clearly identify the Permittees collaborating on each of the regional projects and/or responsible for green streets projects. Although this information is included in Attachment B, this information should be presented in the main Revised EWMP document. Per Part VI.C.5.b.iv.(4).(e) of the LA County MS4 Permit, "[t]he plan shall clearly identify the responsibilities of each participating Permittee for implementation of watershed control measures."
Section 6, Compliance Story	Part VI.C.5.b.iv. (4)	The Revised EWMP main document should clearly provide the control measure (e.g. Non-Structural BMPs; Multi-Benefit Regional Projects; Distributed BMPs – Green Streets; etc.) implementation responsibilities for each Permittee in relation to each milestone and watershed. Although some of this information is summarized in Section 6, further detail is necessary. The group may consider presenting this information in tables; and incorporating cost estimates, load reduction numbers, BMP information, and/or other metrics.

EWMP Reference	MS4 Permit Provision	Comment
		EWMP implementation responsibilities for each Permittee should be clearly summarized and outlined for readers of the document such that EWMP implementation and milestone progress can be tracked.
Attachment A		
Attachment A, Section 2.0		In several instances, Attachment A notes sections, tables, and other material that is "SUPERSEDED BY THE 2018 REVISED EWMP, EXCEPT MATERIAL PERTAINING TO THE CITY OF AZUSA." The Group should revise these references as follows: • If the City of Azusa intends to participate in the proposed revised EWMP, the amendments should be revised accordingly. • If the City of Azusa does not intend to participate in the proposed revised EWMP, the amendments should be revised such that the existing EWMP analyses and targets no longer apply to the City of Azusa—i.e. the proposed 2018 revised EWMP should supersede material pertaining to the City of Azusa.
Attachment A, Section 2.0		The Revised EWMP can be difficult to follow as a standalone document since several sections from the current EWMP document would still apply if the Revised EWMP is approved. To help streamline the document, the Group should consider fully superseding the following sections in the current EWMP with sections in the Revised EWMP and its attachments (new language may be necessary): • Executive Summary • 3.4 Proposed Control Measures • 4 Reasonable Assurance Analysis • 5 Proposed Control Measure Implementation Schedule • 6.1-6.4 Non-Structural BMPs, Regional Projects, Distributed BMPs (Green Streets), Cost Estimate Summary • Attachments Q-U, W-Z Also see earlier comment regarding superseding except for material pertaining to Azusa.
Attachment A – Revision to Section 3.4.1.1		The Revised EWMP makes a revision in Table 3-19 that changes the weighted average from 5.2% to 5%, however the 7% percent reduction for Unincorporated County area does not change. The Group should clarify if there are any changes to enhanced street sweeping implementation and/or any changes to the percent reduction assumptions for each group member.

EWMP Reference	MS4 Permit Provision	Comment
Attachment B		
Attachment B, Exhibit B.2.2		Table 3-1 in Attachment C, Section 3.3 (p. 45) lists a "Constant Cost ($)" for the Rio Hondo Wetland. The Group addresses this stating, "[n]ote the high Rio Hondo Wetland constant cost due to land acquisition requirements." This cost does not appear to be consistent with Section 6, Compliance Story (p. 26), which lists a $80.8M cost or the Fact Sheet Attachment B, Exhibit B.2.2, which has a planning-level cost estimate of $57,994,145 ($3,030,000 for land acquisition). The Group should address these differences in cost estimates.
Attachment C		
Attachment C, Section 2.5	Part VI.C.5.b.iv. (5)	Attachment C, Section 2.5 describes the Group's proposed approach to determine required reductions in Rio Hondo, San Gabriel River, and Big Dalton Wash drainage areas. Please address the following comments and/or provide justification for the approaches that were used. <u>Required Reduction</u> For the Rio Hondo drainage, Table 2-17 and Figure 2-28 indicate that there were 46 wet days during the "critical water year" of 2002/2003, in which there were 13 "exceedance days"—i.e. days wherein the simulated load from the watershed exceeded the calculated allowable load. As the Group notes, "[t]he required load reduction for each wet day exceeding the allowable load were totaled to determine the annual load reduction required." The Group's required zinc load reduction of 1,163 lbs/yr for the Rio Hondo drainage subsequently becomes the final milestone target that the Group uses to plan and propose EWMP control measures. The resulting EWMP control measures are estimated to provide 1,187 lbs/yr of zinc load reduction during the critical water year—145 lbs/yr from redevelopment LID; 188 lbs/yr from enhanced MCMs; and 854 lbs/yr collectively from the Arboretum Wetland Pond, Arboretum Recharge Ponds, and Rio Hondo Wetland. Staff has the following concerns for this method for determining the Group's required reductions. These concerns also apply for the corresponding analyses in the San Gabriel River and Big Dalton Wash drainages: 1. The Group is looking at a different timeframe (year) compared to the Los Angeles River Metals TMDL (day). The proposed EWMP expresses the required load reduction for zinc in lbs/yr. However,

EWMP Reference	MS4 Permit Provision	Comment
		the Los Angeles County MS4 Permit's WQBELs for discharges of metals to the Los Angeles River are expressed in kg/day. Section C of the Los Angeles Water Board's RAA Guidelines[1] notes that required reductions should be consistent with applicable TMDLs with respect to the TMDL's relevant averaging period: *"Estimated allowable loading and required reductions should be expressed on a pollutant-by-pollutant basis consistent with the relevant averaging period(s)/duration (including the selected critical condition) consistent with the TMDL and Attachments L-Q."* 2. By summing the required load reductions for each "exceedance day" to determine the annual required reduction, the Group is adding days that have small required load reductions (in lbs/day) with days that have large required load reductions. $$(1) \quad \text{Required Reduction [lb/yr]} = \sum_{i=1}^{13\ exceed\ days} (\text{Load}_i - \text{Allowable Load}_i)$$ Because of this, there is concern that the exceedance days with higher required load reductions may not be addressed. Furthermore, since control measure reductions are estimated cumulatively for the critical water year, it is presumed that this means that the Revised EWMP's estimated control measure load reductions are the sum of daily estimated control measure load reductions for the 46 wet days during the critical water year. $$(2) \quad \text{Estimated EWMP Load Reductions [lb/yr]} = \sum_{i=1}^{46\ wet\ days} (\text{Load Reductions from BMPs})_i$$ This implies that load reductions from the proposed BMPs achieved on all 46 wet days—including days that were previously not exceeding—are being used to achieve the required reductions for the subset of 13 "exceedance days" previously defined in Section 2.5. 3. Given the above, there is concern that the Group is not using an appropriate critical condition since implementing all the control measures as described in the EWMP does not address all the

[1] *Guidelines for Conducting Reasonable Assurance Analysis in a Watershed Management Program, including an Enhanced Watershed Management Program* dated January 22, 2014

EWMP Reference	MS4 Permit Provision	Comment
		exceedance days identified in Section 2.5 (the Group notes this in Tables 4-12 and 4-13 in Section 4.4). <u>Previously Approved WMPs/EWMPs</u> Permittees with approved WMPs and EWMPs that use an RAA approach similar to that proposed by the Group in the proposed revised EWMP would be expected to take the above concerns into account when they revise their RAA per Part VI.C.8b of the LA County MS4 Permit.
Attachment C, Section 4.4	Part VI.C.5.b.iv. (5)	<u>Integration of Controls Measures into Watershed Model</u> Tables 4-12 and 4-13 show load reduction analysis for the Rio Hondo and San Gabriel River compliance points. As these tables indicate, there are still 3 total wet exceedance days (out of 46 wet days or 6.5%) in the Rio Hondo assessment area and 6 total wet exceedance days (out of 49 wet days, or 12.2%) in the San Gabriel River assessment area. This appears to imply that the critical condition is not addressed. <u>Concentration Curves</u> Figures 4-4 and 4-5 are concentration frequency curves that indicate that over the period October 1, 2001 through September 30, 2011, zinc concentrations would meet CTR criteria in 96.0% and 94.5% of all wet days at the Rio Hondo and San Gabriel River compliance points, respectively. The Group notes that this "provides an additional layer of reasonable assurance that the strategies outlined in this RAA will achieve clean water goals." Please provide further information on how these concentration curves were calculated and why the assumptions used are appropriate. There is concern that annual load reduction estimates converted to daily concentration reduction estimates may be overestimated.
Attachment C, Figure 2-27 (pg. 35)	Part VI.C.5.b.iv. (5)	The Group's RAA approach is based on downstream compliance points which were chosen to ensure that the Group's program addresses downstream water quality impairments per applicable TMDL requirements. The Group should be aware that if data indicate that discharges are causing or contributing to exceedances in upstream waterbodies, the Group may need to develop additional control measures to protect upstream water quality.

Comments on the Revised Reasonable Assurance Analysis (revised RAA) for

Rio Hondo/San Gabriel River Water Quality Group
Revised Enhanced Watershed Management Program (rEWMP)

Prepared by: C.P. Lai, Ph.D., P.E. October 17, 2018

This memorandum contains comments on Attachment C of the Revised Reasonable Assurance Analysis (revised RAA) in the Revised Enhanced Watershed Management Program (rEWMP) report for Rio Hondo/San Gabriel River Water Quality Group dated March 30, 2018.

Comments on revised RAA Modeling:

1. The model calibration results for water quality as presented in the load duration plots shown in Figure 2-16, Figure 2-19, Figure 2-22 and Figure 2-25 indicated that the model underpredicted the water quality of TSS, copper, lead and zinc for lower flow conditions between flow exceedance percentiles of 20% and 30%. In addition, the R^2 of the model prediction for the comparison of simulated results and observed data at S14 for water quality range from 0.06 to 0.23, which is not good for certain conditions. Therefore, additional discussion should be provided regarding the greater error between modeled and observed values for TSS, copper, lead, and zinc and potential explanations should be provided for this discrepancy. Furthermore, applicable model parameters should be revised to improve model calibration for water quality, especially for zinc if possible.

2. The model results of the baseline condition indicated in Table 2-17 through Table 2-19 are not consistent with baseline and reduction loads presented in Figure 2-28 through Figure 2-30 for required load reduction. The baseline loads should be clearly defined in terms of runoff volume, pollutant concentration, and pollutant loads. The duration curves or frequency curves of runoff volume, pollutant concentration and pollutant loads for baseline condition at each analysis region for each pollutant of concern should be presented in the rEWMP report as well to demonstrate that the baseline condition model results are based on the 90th percentile critical condition.

3. The required load reductions obtained from existing load and allowable load listed in Table 2-16 through Table 2-19 should be recalculated based on the maximum required load reductions in lbs/day for the wet days in the selected critical year or based on the 90th percentile of 10-year continuous simulation results of the required load reductions in lbs/day for the critical condition.

4. The estimated allowable loads and required load reductions for each sub-watershed area should be provided to demonstrate that the estimated allowable loads and load reductions are obtained from the 90th percentile critical condition of runoff volume and allowable pollutant concentration specified in receiving water limitations (RWLs). It is recommended that the allowable loads and required load reductions be provided in the same duration curves for baseline condition to demonstrate that the estimated allowable loads and load reductions meet the 90th percentile critical condition.

5. In the report, summary statistics of load reduction and percent reduction for different control measures are provided in Table 4-1 and Table 4-8. However, some of the

information used to derive the modeled load reduction values are missing such as the modeled load reduction of 854 and 64.3 lbs/yr for regional projects. In addition, the modeled results of watershed load reductions under the "Baseline" condition and "After Implementation" condition in Table 4-12 and Table 4-13 did not demonstrate the ability of the proposed BMPs to achieve the required load reductions. There was not sufficient information provided in these two tables to show how the model values were calculated. Accordingly, a detailed reasonable assurance analysis for the proposed BMPs for each analysis region should be provided and the detailed model results should be presented in terms of 1) capture volume; 2) pollutant concentration; and 3) watershed load through a system of BMPs at the downstream of BMP systems for the selected critical year in the rEWMP report to demonstrate the effectiveness of the proposed BMPs.

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