



EDMUND G. BROWN JR.  
GOVERNOR

MATTHEW RODRIGUEZ  
SECRETARY FOR  
ENVIRONMENTAL PROTECTION

## Los Angeles Regional Water Quality Control Board

October 7, 2014

Mr. Nelson Hernandez  
City Manager  
City of Carson  
701 E. Carson Street  
Carson, CA 90745

### **NOTICE OF DEFICIENT SUBMITTAL 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 Mr. Hernandez:

On November 8, 2012, the California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) adopted Order No. R4-2012-0175, *Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, except those Discharges Originating from the City of Long Beach* (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.

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.

On June 26, 2014, the City of Carson (City) submitted a draft "Watershed Management-focused Stormwater Management Program Plan" 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 City's submittal and has determined that the submittal does not meet the requirements for a draft WMP pursuant to Part VI.C of the LA County MS4 Permit. The deficiencies of the City's submittal are identified in attachments to this letter. In general, the City's submittal does not address all water quality priorities, including all applicable water quality-based effluent limitations and receiving water limitations; lacks a sufficient RAA; does not include adequate specificity on proposed watershed

CHARLES STRINGER, CHAIR | SAMUEL UNGER, EXECUTIVE OFFICER

320 West 4th St., Suite 200, Los Angeles, CA 90013 | [www.waterboards.ca.gov/losangeles](http://www.waterboards.ca.gov/losangeles)

control measures, including supportable data on the anticipated significant pollutant load reduction from implementation of these measures; and does not include measurable interim milestones and dates for their achievement.

Further, the City's submittal largely restates the baseline stormwater management program requirements of the LA County MS4 Permit and enumerates the City's concerns with the WMP provisions of the LA County MS4 Permit. As previously noted, development of WMP is voluntary. The City's submittal, if intended as a draft WMP pursuant to Part VI.C, is not the appropriate vehicle for identifying concerns with the WMP provisions.

Because the City's submittal does not meet the basic requirements for a draft WMP pursuant to Part VI.C of the LA County MS4 Permit, the City is subject to the baseline requirements of the LA County MS4 Permit. The City shall demonstrate compliance with the baseline requirements, including Receiving Water Limitations pursuant to Part V.A.1 and with applicable interim and final WQBELs in Part VI.E and Attachments N, Parts B-E, and O, Parts A-D, pursuant to subparts VI.E.2.d.i.(1)-(3) and VI.E.2.e.i.(1)-(3), respectively. Additionally, the City must begin monitoring pursuant to the requirements of Attachment E of the LA County MS4 Permit, including receiving water monitoring during wet and dry weather, stormwater outfall based monitoring<sup>1</sup>, non-stormwater outfall based screening and monitoring, and TMDL compliance monitoring as required in the Dominguez Channel and Greater Harbor Waters Toxic Pollutants TMDL; the Los Angeles River TMDLs for trash, nitrogen compounds, metals and bacteria; and the Machado Lake TMDLs for trash, nutrients and pesticides and PCBs.

If you have any questions, please call Ivar Ridgeway at (213) 620-2150 or e-mail him at [Ivar.Ridgeway@waterboards.ca.gov](mailto:Ivar.Ridgeway@waterboards.ca.gov).

Sincerely,



Samuel Unger, P.E.  
Executive Officer

Enclosures:

Attachment - Summary of Deficiencies  
Comments on Reasonable Assurance Analysis

cc: Mr. Julio Gonzalez, Engineering Services Division, City of Carson  
Mr. Ray Tahir, TECS Environmental, Inc.

---

<sup>1</sup> Stormwater discharges from the MS4 may be monitored at outfalls or alternative access points such as manholes at the Permittee's jurisdictional boundary. The drainage(s) to the selected outfall(s) or alternative access point(s) must be representative of the land uses within the Permittee's jurisdiction.

Los Angeles Regional Water Quality Control Board

Attachment to October 7, 2014 Letter Regarding the City of Carson's June 26, 2014 Submittal Pursuant to Part VI.C of the LA County MS4 Permit (Order No. R4-2012-0175)

Summary of Deficiencies of Submittal in Relation to Permit Provisions

LA County MS4 Permit Provision	Summary of Deficiency
Parts VI.C.5.a.ii(1) and iv(1)	<p>The City's submittal does not comprehensively analyze and develop a strategy through its Reasonable Assurance Analysis (RAA) for all applicable water quality-based effluent limitations (WQBELs) to comply with provisions of Part VI.E and Attachments N and O related to applicable TMDLs.</p> <p>Applicable TMDLs include the Los Angeles River Watershed TMDLs for trash, nitrogen compounds, metals and bacteria; Machado Lake TMDLs for trash, nutrients and pesticides and PCBs; and the Dominguez Channel and Greater Harbor Waters Toxic Pollutants TMDL.</p>
Part VI.C.5.a.ii(2) and iv(2)	<p>The City's submittal does not address in its RAA other pollutants that are impairing receiving waters to which the City's MS4 discharges (as identified on the State's Clean Water Act Section 303(d) List or based on an analysis of monitoring data per the State's Clean Water Act section 303(d) listing criteria), such as bacteria.</p>
Part VI.C.5.a.ii(3) and iv(2)	<p>The City's submittal does not address other pollutants that are otherwise causing or contributing to an exceedance of Receiving Water Limitations in receiving waters to which the City's MS4 discharges.</p>
Part VI.C.5.a.iii	<p>The City's submittal does not include a source assessment.</p>
Part VI.C.5.b.iv(5)	<p>The City's RAA does not address all applicable WQBELs and Receiving Water Limitations in Attachments N and O or other applicable waterbody-pollutant combinations falling within Categories 2 or 3. The City assumes that its analysis for Dominguez Channel and, specifically, for Cu, Pb and Zn is adequately representative and that controls implemented to address these pollutants will address all other pollutants in Dominguez Channel as well as in Compton Creek and Machado Lake. (See also detailed comments on the City's RAA in the attached memorandum.)</p>
Parts VI.C.1.c-d and VI.C.5.b	<p>The City's submittal does not propose, or analyze through the required RAA, customized strategies, control measures, and BMPs to address water quality priorities nor does it ensure that discharges from the City's MS4 will: (i) achieve applicable WQBELs in Part VI.E and Attachments N and O pursuant to the corresponding compliance schedules, (ii) do not cause or contribute</p>

LA County MS4 Permit Provision	Summary of Deficiency
	to exceedances of Receiving Water Limitations in Parts V.A and VI.E and Attachments N and O, and (iii) do not include non-storm water discharges that are effectively prohibited pursuant to Part III.
Part VI.C.5.b.iv(1)	The City's submittal does not assess or identify modifications to the minimum control measures in Parts VI.D.4 to VI.D.10 to address watershed priorities.
Part VI.C.5.b.iv(5)	The City's submittal assumes significant pollutant load reductions in its RAA without providing support from peer-reviewed sources. The City's submittal also assumes pollutant load reductions from implementation of minimum control measures that were previously required under the 2001 LA County MS4 Permit without supporting documentation for the additional anticipated pollutant load reductions.
Part VI.C.5.c	The City's submittal neither provides milestones based on measurable criteria for implementation of watershed control measures and corresponding dates for their achievement within the term of the LA County MS4 Permit nor provides a final date for achieving Receiving Water Limitations for pollutants not addressed by Part VI.E.
Attachment E, Part IV.A.6	The City's submittal does not include an integrated monitoring and assessment program that meets the minimum requirements identified in Attachment E, Part IV.A.6. The City submitted a "Monitoring and Reporting Program;" however, the proposed program does not include receiving water monitoring or non-storm water outfall monitoring – both of which are required.
Part VI.C.8	The City's submittal does not include a process for revising the WMP, including the RAA, to adapt the program every two years based on new data and information.

---

Los Angeles Regional Water Quality Control Board

**TO:** Mr. Julio Gonzalez, Senior Engineering Technician  
NPDES Section, Engineering Services Division  
City of Carson

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

**DATE:** October 7, 2014

**SUBJECT:** COMMENTS ON REASONABLE ASSURANCE ANALYSIS REPORT FOR CITY  
OF CARSON

This memorandum contains comments on Appendix B, "Reasonable Assurance Analysis" (RAA), dated June 28, 2014, which was submitted by the City of Carson.

- A. General comments on the draft Reasonable Assurance Analysis section of the Stormwater and Watershed Management Program.
1. Pursuant to Part VI.C.5.a.iv(1) and VI.C.5.b.iv.(3)-(4), pages 60 and 62-63 of the MS4 Permit, the RAA did not include or fully analyze a strategy to implement pollutant controls necessary toward achieving all applicable interim and final water quality-based effluent limitations and/or receiving water limitations with interim or final compliance deadlines within the permit term pursuant to the corresponding compliance schedules.

The City is subject to the interim and final water quality-based effluent limitations pursuant to (1) Attachment N, Part B "Machado Lake Trash TMDL", Part C "Machado Lake Nutrient TMDL", Part D "Machado Lake Pesticides and PCBs TMDL", Part E "Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL"; and (2) Attachment O, Part A "Los Angeles River Watershed Trash TMDL", Part B "Los Angeles River Nitrogen Compounds and Related Effects TMDL", Part C "Los Angeles River and Tributaries Metals TMDL", and Part D "Los Angeles River Watershed Bacteria TMDL". The LA County MS4 Permit specifies interim and final water quality-based effluent limitations in the water column applicable to stormwater discharges in dry and wet weather conditions. While the RAA indicates that the interim WQBELs for copper, lead and zinc in the water column are met at all times, the RAA is incomplete, as described below.

Attachment N, Parts D and E also specify interim and final water quality-based effluent limitations for pollutant concentrations in sediment discharged from the City's MS4, including copper, lead, zinc, cadmium, DDT, PAHs and PCBs WQBELs applicable to discharges to Dominguez Channel Estuary and total PCBs, DDT, DDE, DDD, total DDT, chlordane and dieldrin WQBELs applicable to discharges to Machado Lake. The City must demonstrate that its discharges are, or will, meet the applicable interim WQBELs

within this permit term and must propose a measurable interim milestone within the current permit term for meeting the final cadmium effluent limitation, or demonstrate that its MS4 discharges are already meeting the final effluent limitation.

A draft WMP must specify in detail the specific structural and non-structural best management practices it will implement, including the *number, type, and location(s) and frequency of implementation*, to achieve the abovementioned water quality-based effluent limitations.

Pursuant to Part VI.C.5.b.iv(4)(d), page 63 of the MS4 Permit, the City's submittal did not include interim measurable milestones and dates for the implementation of each structural control and non-structural best management practices to ensure that TMDL compliance deadlines will be met.

Pursuant to Part VI.C.5.c, page 64 of the MS4 Permit, the draft WMP did not clearly enumerate or incorporate the compliance schedules in Attachments N and O and, where necessary develop additional interim milestones and dates for their achievement within the permit term (e.g., cadmium).

2. Pursuant to Part VI.C.5.a of the MS4 Permit and Section A of the RAA guidelines, the City's submittal did not identify and analyze all water body-pollutant combinations in Categories 2-3 for the purposes of sequencing implementation of watershed control measures taking into consideration compliance deadlines and opportunities to address multiple pollutants within Machado Lake, Los Angeles River (Compton Creek), and Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters.

A draft WMP must specify in detail the specific structural and non-structural best management practices it will implement, *including the number, type, and location(s) and frequency of implementation*, to achieve the abovementioned water quality priorities (i.e., address pollutants falling within Categories 2-3).

For pollutants that are exceeding receiving water limitations and that are not addressed by a TMDL, a WMP must include for each waterbody-pollutant combination (i) pollutant reduction milestones based on measurable criteria or indicators; (ii) a schedule for achieving each milestone; and (iii) a final date for achieving the receiving water limitation that is as soon as possible.

3. For the pollutants that were included in the analysis, the City's submittal provides no support or justification from peer-reviewed sources for the anticipated pollutant reduction of 77% for metals, 99% for pH and CN, and 100% for nutrients, pesticides, PCBs, pathogens, and trash from the baseline loads to be achieved by the BMPs identified in Appendix B, Table 1. The majority of the watershed control measures identified in Appendix B, Table 1 are actions that were previously required under the six categories of minimum control measures in the 2001 LA County MS4 Permit. Therefore, any pollutant reductions from these activities are likely already reflected in estimates of baseline loading used in the RAA. For these watershed control measures, the City must provide details regarding whether and how these measures will be enhanced during this permit term. Additionally, the City must provide measurable milestones for implementing each one of the control measures.

4. Pursuant Part VI.C.5.b.iv(4)(e), page 63 of the MS4 Permit, the draft WMP did not clearly identify the City's responsibilities for implementation of watershed control measures.
5. The draft WMP did not include a proposed adaptive management process to be conducted every two years to assess progress toward achieving applicable water quality-based effluent limitations and receiving water limitations, re-evaluation of the water quality priorities, and evaluation of effectiveness of the control measures based on new information and data.

B. Modeling comments regarding analysis of copper, lead, and zinc concentrations/loads:

1. The model predicted highest dissolved concentration annual average mass contributions of pollutants from the City shown in Page 6 are not consistent with those values directly from the model output. In Appendix B, results are presented in terms of lbs/year; however, the results should be presented consistent with the expression of the WQBELs in Attachments N and O of the MS4 Permit.
2. The expected reductions in pollutant load from baseline to be achieved by the BMPs identified in Table 1 need to be supported with documentation from peer-reviewed studies or monitoring data results
3. The report did not describe how the model was calibrated, including calibration results compared to calibration criteria in Table 3.0 of the RAA Guidelines, and no historical hydrology and water quality monitoring data were used for comparison with the model results for the baseline prediction. According to Part G, pages 12-13 of the RAA Guidelines, model calibration is necessary to ensure that the model can properly assess all the variables and conditions in a watershed system. In addition, it should be noted that using SWAMP data alone is not sufficient for RAA modeling analysis.
4. The report did not describe or evaluate the critical condition for the modeling. The input rainfall should be presented in the report and explain what the modeling periods are that are being simulated for the critical condition. Pursuant to Part B on pages 2-4 of the RAA Guidelines, a description of the process for identifying critical conditions is needed prior to the RAA modeling analysis. A summary of TMDL critical conditions relevant to MS4 discharges was provided in Appendix B of the RAA Guidelines for Permittees' reference. The report presents annual average mass contributions of copper, lead and zinc, but does not present mass contributions under the critical condition.
5. The ID for each of the 82 subwatersheds used in the model simulation must be provided and be shown in the simulation domain to present the geographic relationship of subwatersheds simulated in the LSPC model.
6. The flow and water quality time series output at the watershed outlet must be provided using the 90<sup>th</sup> percentile of modeled pollutant concentration and mass per day for wet event days consistent with the expression of the WQBELs instead of using highest concentration and average annual mass over simulation periods to estimate the baseline concentration and mass. In addition, per RAA Guidelines, the model output should include storm water runoff at outlet for baseline and each BMP scenario as well (See

Table 5. Model Output for both Process-based BMP Models and Empirically-based BMP Models, pages 20-21 of the RAA Guidelines).

7. Model simulation for dissolved copper, lead and zinc under the dry weather condition was not included in the Report.
  8. Per the RAA Guidelines, the required load reduction should be evaluated at the jurisdictional boundary of each subwatershed to demonstrate that the proposed control measures will ensure that the City's MS4 discharges achieve effluent limitations and do not cause or contribute to exceedances of receiving water limitations. The BMP performance model proposed in the RAA Guidelines should be used to predict the pollutant reduction for BMPs identified in Table 1 instead of using BMP Performance Table identified in Table 1 of the Report.
- C. Modeling comments regarding lack of analysis for other Categories 1, 2 and 3 waterbody pollutant combinations:
1. Baseline loading and required reductions to achieve effluent limitations for total copper, lead, zinc, cadmium, DDT, PAHs, and PCBs in sediment discharged from the MS4 were not modeled in the Report, nor were proposed watershed control measures evaluated in the model to determine if effluent limitations for these pollutants would be achieved upon implementation of the proposed measures.
  2. Model simulations, baseline loadings, and required reductions for Machado Lake nutrients, pesticides, and PCBs, and Los Angeles River metals and bacteria were not included in the Report.
  3. Baseline loading and required reductions for Category 2 and Category 3 pollutants, including indicator bacteria and ammonia, were not modeled, nor were proposed watershed control measures evaluated in the model to determine if receiving water limitations for these pollutants would be achieved upon implementation of the proposed measures.