

## Los Angeles Regional Water Quality Control Board

January 16, 2015

Mr. Nelson Hernandez  
City Manager  
City of Carson  
701 E. Carson St.  
P.O. Box 6234  
Carson, CA 90745

**REVIEW OF THE CITY OF CARSON INTEGRATED MONITORING PROGRAM, PURSUANT TO ATTACHMENT E, PART IV.A OF THE LOS ANGELES COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT (NPDES PERMIT NO. CAS004001; ORDER NO. R4-2012-0175)**

Dear Mr. Hernandez:

The Regional Water Board has reviewed the draft monitoring program submitted on June 26, 2014 by the City of Carson (City). This monitoring 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 individually develop and implement an integrated monitoring program (IMP) that achieves the five Primary Objectives set forth in Part II.A of Attachment E and includes the elements set forth in Part II.E of Attachment E. These programs must be approved by the Executive Officer of the Regional Water Board.

Although the City submitted its monitoring program as a Coordinated Integrated Monitoring Program (CIMP)\*, pursuant to Part II.C and II.D of Attachment E of the LA County MS4 Permit, the City's submitted monitoring program will be addressed hereafter as an IMP. Pursuant to Part IV.B of Attachment E, the City may choose to also coordinate with other Permittees or existing watershed groups to develop and implement a CIMP in combination with the City's IMP, in order to address required elements set forth in Part II.E of Attachment E that are not addressed in the City's IMP. If the City's IMP does not address all required elements in Part II.E of Attachment E, it cannot be approved without the Regional Water Board having a copy of each final agreement between the City and any other group(s) the City is collaborating with on a CIMP(s) to address the remaining required elements. It should be noted that should any of the CIMPs the City is relying upon not receive an approval from the Regional Water Board Executive Officer, the City of Carson would be responsible for complying with the monitoring requirements that the CIMP was intended to address.

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\* The intent of a CIMP is to allow multiple Permittees to coordinate monitoring on a watershed or subwatershed level.

The Regional Water Board has reviewed the City's draft monitoring program and has determined that the monitoring program submitted is missing the following substantive elements set forth in Part II.E to achieve the Primary Objectives as set forth in Part II.A of Attachment E of the LA County MS4 Permit:

- Receiving water monitoring
- Non-storm water outfall based monitoring

The Regional Water Board's comments on the City of Carson's IMP, including detailed information concerning necessary additions and revisions to the IMP, are found in Enclosure 1.

Please note that per the Notice of Deficient Submittal letter sent to the City on October 7, 2014, the City is subject to the baseline requirements of the LA County MS4 Permit, including Receiving Water Limitations (Part V.A.1) and applicable interim and final water quality-based effluent limitations (WQBELs) in Part VI.E and Attachments N, Parts B-E, and O, Parts A-D. Further, Permittees that are not subject to the Watershed Management Program provisions (Part VI.C) were required to either begin monitoring pursuant to the requirements of Attachment E of the LA County MS4 Permit by June 28, 2013, or submit an IMP by December 28, 2013. Please make the necessary additions and revisions to the IMP, as identified in the enclosures to this letter, and submit the revised IMP as soon as possible and no later than **February 16, 2015**. The revised IMP must be submitted to [losangeles@waterboards.ca.gov](mailto:losangeles@waterboards.ca.gov) with the subject line "LA County MS4 Permit – Revised City of Carson Integrated Monitoring Program" with a copy to [Ivar.Ridgeway@waterboards.ca.gov](mailto:Ivar.Ridgeway@waterboards.ca.gov) and [Erum.Razzak@waterboards.ca.gov](mailto:Erum.Razzak@waterboards.ca.gov).

Upon approval of the revised IMP by the Executive Officer, the City must prepare to commence its monitoring program immediately. If the necessary revisions are not made, the City must comply with the Monitoring and Reporting Program and future revisions thereto, in Attachment E of the LA County MS4 Permit.

Until the City's IMP is approved by the Executive Officer, the monitoring requirements pursuant to Order No. 01-182 and Monitoring and Reporting Program CI 6948, and pursuant to approved TMDL monitoring plans shall remain in effect for the City.

If you have any questions, please contact Ms. Erum Razzak of the Storm Water Permitting Unit by electronic mail at [Erum.Razzak@waterboards.ca.gov](mailto:Erum.Razzak@waterboards.ca.gov) or by phone at (213) 620-2095. Alternatively, you may also contact Mr. Ivar Ridgeway, Chief of the Storm Water Permitting Unit, by electronic mail at [Ivar.Ridgeway@waterboards.ca.gov](mailto:Ivar.Ridgeway@waterboards.ca.gov) or by phone at (213) 620-2150.

Sincerely,



Samuel Unger, P.E.  
Executive Officer

cc: Mahdiyeh Kargar, City of Carson  
Julio Gonzalez, City of Carson

Enclosures: Enclosure 1 – Summary of Comments and Required Revisions  
Enclosure 2 – Applicable TMDLs, Action Levels, and 303(d)-listed Pollutants

Los Angeles Regional Water Quality Control Board

**Enclosure 1 – Summary of Comments and Necessary Revisions to Draft IMP**

**City of Carson**

IMP Reference	MRP Element/ Reference (Attachment E)	Comment and Necessary Revision
<b>General</b>		
	Attachment D Part III.B and Attachment E Part III.G	<p>The draft IMP does not specify that that monitoring will be conducted according to test procedures approved under 40 CFR Part 136 for the analysis of pollutants unless another test procedure is required under 40 CFR subchapters N or O or is otherwise specified in the Los Angeles County MS4 permit for such pollutants [40 CFR sections 122.41(j)(4) and 122.44(i)(iv)]. Note (if applicable):</p> <ul style="list-style-type: none"> <li>• Suspended-Sediment Concentration (SSC) shall be analyzed per American Society for Testing and Materials (ASTM) Standard Test Method D-3977-97.</li> <li>• Monitoring methods for trash shall be conducted in accordance with the applicable requirements specified in Part VI.E.5 of Order R4-2012-0175.</li> <li>• Aquatic toxicity shall be monitored in accordance with Part XII of Attachment E.</li> <li>• For Mercury (Hg) EPA Method 245.7 or 1631E should be used (not Method 245.1) to get sufficiently sensitive minimum levels for analytical results to be compared with the water quality objective.</li> <li>• Samples should be analyzed using EPA Method 8270 or 1668C (as appropriate), and High Resolution Mass Spectrometry.</li> <li>• Monitoring for PCBs in sediment or water should be reported as the summation of aroclors and a minimum of 40 (and preferably at least 50) congeners. See Table C8 in the state’s Surface Water Ambient Monitoring Program’s Quality Assurance Program Plan (Page 72 of Appendix C), which can be downloaded at <a href="http://www.waterboards.ca.gov/water_issues/programs/s_wamp/docs/qapp/qapprp082209.pdf">http://www.waterboards.ca.gov/water_issues/programs/s_wamp/docs/qapp/qapprp082209.pdf</a> for guidance.</li> </ul>
	Part IV.A.6	The revised IMP must address all TMDL and non-TMDL monitoring requirements of the LA County MS4 Permit for receiving water,

IMP Reference	MRP Element/ Reference (Attachment E)	Comment and Necessary Revision
		storm water outfall based monitoring, non-storm water outfall based monitoring, and regional studies, except as provided in Parts IV.A.4 and 5 and IV.B.2 - 6 of the MRP. See Enclosure 2.
Section 1.0		Please correct typographical error in draft IMP for the MRP number from "CI948" to "CI 6948".
Section 1.9		Please correct typographical error in draft IMP sub-section title: "1.09 Toxicity Monitoring" to "1.9 Toxicity Monitoring".
		The draft IMP includes various tables but does not clearly reference them in the text. The revised IMP should clearly reference any tables in the main text. Tables in the IMP listing TMDLs and/or other non-TMDL requirements should clearly indicate the applicable type of proposed monitoring (i.e., dry/wet weather, receiving water, storm water outfall based, non-stormwater outfall based).
Table V	Table E-2	Table V – WMP Monitoring for Non-TMDL Water Quality Standards in the draft IMP is incomplete. Please refer to the LA County MS4 Permit Attachment E Table E-2. Please note that Table E-2 lists constituents that need to be included as part of the receiving water monitoring (Part VI.C.1.e & Part VI.D.1.d), stormwater outfall-based monitoring (Part VIII.B.1.d) and non-stormwater outfall based monitoring (Part IX.G.1.e).
<b>Receiving Water Monitoring</b>		
Section 1.3	Part II.E.1	<p>The draft IMP states that the City will not be doing any receiving water monitoring due to its administrative petition. The draft IMP also states that any receiving water data will be obtained by the Surface Water Ambient Monitoring Program (SWAMP) and by other agencies including but not limited to the Council for Watershed Health (CWH) and the Sanitation Districts of Los Angeles County (SDLAC).</p> <p>However, data from SWAMP and the aforementioned agencies is not sufficient to fulfill the requirements of the LA County MS4 Permit. The revised IMP must include receiving water monitoring as per Parts VI.A and VI.C-D of Attachment E. Alternatively, the City must provide the final agreement(s) among the City and other Permittees under the LA County MS4 Permit to conduct the required receiving water monitoring through a CIMP per Part VI.B-D of Attachment E and provide a copy of the CIMP.</p>
		The City does not include receiving water monitoring above the Los Angeles River Estuary as required by the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL (Harbor Toxics TMDL). Please refer to Enclosure 2

IMP Reference	MRP Element/ Reference (Attachment E)	Comment and Necessary Revision
		for requirements.
<b>Storm Water Outfall Based Monitoring</b>		
Table II - XII	Part II.E.2	<p>The list of TMDL monitoring requirements is incomplete and contains erroneous values and compliance deadlines for some of the water quality-based effluent limitations (WQBELs). Please refer to Enclosure 2 for TMDL requirements applicable to the City. (Among other issues, note in particular that the final wet weather WLAs included in Table II are mass-based WLAs shared among all MS4 Permittees draining to the freshwater portion of the channel. Therefore, the City's allowed pollutant load is only a portion of this amount, equivalent to the percent of the drainage area within the City's jurisdictional boundary. Additionally, Table III lists erroneous values for dry weather WLAs (WQBELs) for the Dominguez Channel. For the freshwater portion of Dominguez Channel, the Dominguez Channel and Harbors Toxics TMDL only established <i>wet weather</i> WLAs for MS4 discharges. During dry weather, MS4 discharges must not cause or contribute to exceedances in Dominguez Channel of the acute and chronic hardness dependent water quality criteria for copper, lead and zinc established in the California Toxics Rule [40 C.F.R. section 131.38].)</p> <p>Note that the TMDL monitoring requirements will also be applicable to receiving water and non-storm water outfall based monitoring as per Part II.E.1 and Part II.E.3.</p>
	Part VII.A.1 – VII.A.10	<p>The draft IMP gives a map (Appendix A-3) showing the watersheds within the City. However, no sub-watersheds (HUC 12 drainage areas) are shown on that map. Also, a map is given showing storm drain locations (Appendix A-4) but no further description is given about them on whether there are open channels and underground pipes 18 inches in diameter or greater (with the exception of catch basin connector pipes).</p> <p>The revised IMP should provide the following required elements:</p> <ul style="list-style-type: none"> <li>• Sub-watershed (HUC 12 drainage area) boundaries</li> <li>• Surface water bodies within the Permittee's jurisdiction</li> <li>• Effective Impervious Area (EIA) overlay (if available)</li> <li>• The location and length of all open channels and underground pipes 18 inches in diameter or greater (with the exception of catch basin connector pipes)</li> <li>• The location of all dry weather diversions</li> <li>• Notation of outfalls with significant non-storm water discharges (to be updated annually)</li> </ul>

IMP Reference	MRP Element/ Reference (Attachment E)	Comment and Necessary Revision
		<ul style="list-style-type: none"> <li>Storm drain outfall catchment areas (also known as drainage areas) for each major outfall within the Permittee's jurisdiction</li> </ul>
	Part VII.A.11	<p>The draft IMP includes the coordinates for the field screening points in Appendix A-1. The following additional information about the field screening points must be included:</p> <ul style="list-style-type: none"> <li>Ownership</li> <li>General physical description</li> <li>Photographs of the outfall (where possible)</li> </ul>
Section 1.4 & Appendix A-1	Part VIII.A.2.a	<p>The draft IMP does not provide information about the different subwatersheds (HUC 12 drainage areas) within the City's jurisdiction. Therefore, the Regional Water Board is unable to verify if there is at least one field screening point per subwatershed (HUC 12 drainage area).</p> <p>There is a discrepancy in the information provided on the number of field screening points the City has chosen. The main text in the draft IMP and Appendix A-1 list different numbers of field screening points. The revised IMP must reconcile any discrepancies between the main text and the appendices.</p> <p>In addition, two of the field screening points in Appendix A-1 are named the same: "Field Screening Point #1". The revised IMP must have different alphanumeric identifiers for each field screening point.</p> <p>The City intends to sample three times a year from one of the four field screening points representative of Dominguez Channel on a rotating basis and sample three times a year for each field screening point representative of Machado Lake and Los Angeles River Reach 1. Furthermore, the City intends to collect samples for Compton Creek and Machado Lake three times during the wet season (October 1 through May 15). However, monitoring at the field screening point representing Los Angeles River Reach 1 is not required because the City's MS4 does not contribute to it.</p> <p>The City must ensure that at least one field screening point per subwatershed (HUC 12 drainage area), within the City's jurisdiction, is being sampled each year.</p>
Section 1.4	Part VIII.A.2.b	<p>Although the draft IMP claims that each of the field screening points is representative of land uses within the City's jurisdiction, there is insufficient justification for selection of the points. To</p>

IMP Reference	MRP Element/ Reference (Attachment E)	Comment and Necessary Revision
		<p>provide sufficient justification, the City must provide a land use map that shows the catchment area (also known as the drainage area) for each field screening point and tabular data. Specifically, the table should include:</p> <ul style="list-style-type: none"> <li>• Land use breakdown (acres and percent) for the entire City</li> <li>• Individual breakdowns for each subwatershed (HUC 12 drainage area) within the City</li> <li>• Individual breakdowns for the catchment area within the City that drains to each of the screening points</li> </ul>
Section 1.16	Part VIII.B.1.b.i & VIII.B.1.b.ii	<p>Wet weather conditions in the draft IMP are defined as a “storm event that is greater than 0.1 inch and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event”. This definition is only applicable if the receiving water is the Santa Monica Bay or other ocean or estuary water body.</p> <p>However, when the receiving water body is a river, stream or creek, wet weather shall be defined as when the flow within the receiving water is at least 20 percent greater than the base flow or an alternative threshold as provided for in an approved IMP or CIMP, or as defined by effective TMDLs within the watershed. As per Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL, wet-weather is defined as any day when the maximum daily flow measured at a location within the Dominguez Channel is equal to or greater than 62.7 cfs. As per Los Angeles River and Tributaries Metals TMDL, wet weather is defined as any day when the maximum daily flow in the Los Angeles River is equal to or greater than 500 cfs measured at the Wardlow gage station.</p>
	Part VIII.B.1.b.iii	<p>The draft IMP does not specify if the first storm event of the year is targeted. The Permittee is required to target the first storm event of the storm year with a predicted rainfall of at least 0.25 inch at a seventy percent probability of rainfall at least 24 hours prior to the event start time.</p>
Appendix B Table I - III	Parts VIII.B.1.c & VIII.B.1.d	<p>The draft IMP does not include monitoring for:</p> <ul style="list-style-type: none"> <li>• Flow</li> <li>• Pollutants identified in a TIE conducted at the downstream receiving water monitoring station during the most recent sample event, or where the TIE conducted on the receiving water sample was inconclusive, aquatic toxicity</li> <li>• Other parameters in Table E-2 identified as exceeding the lowest applicable water quality objective in the nearest downstream receiving water monitoring station</li> </ul>

IMP Reference	MRP Element/ Reference (Attachment E)	Comment and Necessary Revision
		CWA 303(d) list pollutants for Dominguez Channel ( <i>above Vermont Ave</i> ) and Compton Creek are not listed in Appendix B. Also note that TMDL requirements already address pollutants listed in Appendix B Tables I, II, and III, with the exception of ammonia and coliform bacteria in Dominguez Channel below Vermont Avenue. Please refer to Enclosure 2 for applicable 303(d)-listed pollutants that are not addressed by a TMDL for the waterbody.
Section 1.16	Part VIII.C.1	The sampling protocol in Section 1.16, subpart ii is inconsistent with Part VIII.C.1 of Attachment E. The IMP must be revised to ensure that storm water samples from field screening points will be taken in each hour of discharge for the first 24 hours of the discharge or for the entire discharge if the storm event is less than 24 hours.
Table XIII	Attachment G Part VIII	Table XIII - Municipal Action Levels in the draft IMP is incomplete and lists incorrect constituents and erroneous values. Please refer to Enclosure 2 for requirements.
<b>Non-Storm Water Outfall Based Monitoring</b>		
Section 1.5	Part II.E.3	<p>The draft IMP states that there will only be non-stormwater monitoring to detect and eliminate illicit connections and discharges.</p> <p>As per the LA County MS4 Permit, non-stormwater outfall based monitoring must be included in the revised IMP as outlined Part IX of Attachment E.</p>
Table XIV		Action levels given in the draft IMP should be applicable to all non-stormwater outfall-based monitoring. Table XIV – Action Levels (Non-Stormwater) in the draft IMP is incomplete and lists incorrect constituents and values. Furthermore, Table XIV does not specify the receiving water salinity for the action levels it plans to comply with. Please refer to Enclosure 2 for requirements.
<b>Regional Studies</b>		
	Part II.E.5 & XI	No regional studies were included in the draft IMP. The County of LA has committed to doing all the bio-assessment monitoring for LA County. The revised IMP could reference LA County efforts to fulfill the requirements of the LA County MS4 Permit as per Part XIX of Attachment E.
<b>Aquatic Toxicity</b>		
Section 1.9 & 1.16	Part XII	The draft IMP includes toxicity testing only for storm water outfall-based monitoring and proposes that toxicity will be monitored three times a year beginning 2015-2016 wet season and annually thereafter. The draft IMP also gives a USEPA sampling protocol but does not state if the City intends to use that sampling protocol.



IMP Reference	MRP Element/ Reference (Attachment E)	Comment and Necessary Revision
		<p>Additionally, the draft IMP states that toxicity testing will be done using the 7-day test with <i>Ceriodaphnia dubia</i> (growth, survival) and the 7-day test with <i>Pimephales promelas</i> (biomass, survival). However, the static renewal toxicity test with the green alga, <i>Selenastrum capricornutum</i> (also named <i>Raphidocelis subcapitata</i>) (Growth Test Method 1003.0) is missing and no justification is given. Pursuant to Part XII.G.3 of Attachment E, Test Species Sensitivity Screening, to determine the most sensitive species for toxicity testing, the City must conduct two wet weather and two dry weather toxicity tests with a vertebrate, an invertebrate, and a plant. After this screening period, subsequent monitoring shall be conducted using the most sensitive test species.</p> <p>The revised IMP should meet all the requirements stated under Part XII of Attachment E.</p>

Los Angeles Regional Water Quality Control Board

**Enclosure 2 – Applicable TMDLs, Action Levels, and 303(d)-listed Pollutants<sup>1</sup>**

**City of Carson**

**Applicable TMDLs**

Dominguez Channel Watershed Management Area TMDLs (Attachment K Table K-4)

- Machado Lake **trash** (Attachment N Part B)
- Machado Lake **nutrient** (Attachment N Part C)
- Machado Lake **Pesticides and PCBs** (Attachment N Part D)
- Dominguez Channel and Greater Los Angeles Long Beach Harbor Waters **Toxic Pollutants** (Table K-13 & Attachment N Part E)
  - Dominguez Channel
  - Dominguez Channel Estuary
  - In addition to Attachment N Part E.2.a.ii, samples of non-stormwater collected from outfalls during flow conditions less than the 90<sup>th</sup> percentile of annual flow rates must demonstrate that the acute and chronic hardness dependent water quality criteria (for copper, lead and zinc) provided in the California Toxics Rule (CTR) are achieved (see Attachment N Part E.3.a.ii, footnote 6).

Los Angeles River Watershed Management Area TMDLs (Attachment K Table K-5)

- LA River **trash** (Attachment O Part A)
- LA River **Nitrogen Compounds and Related Effects** (Attachment O Part B)
  - Los Angeles Tributaries (see table under Part B.2)
- LA River and Tributaries **metals** (Table K-9 & Attachment O Part C)
  - Compton Creek (listed in Table K-9 as “Reach 1 and Compton Creek” Jurisdictional Group, but Carson only drains to Compton Creek)
- LA River **bacteria** (Table K-10 and Attachment O Part D)
  - Compton Creek
  - Table O-1 Segment A Tributary (Compton Creek)
- Dominguez Channel and Greater Los Angeles Long Beach Harbor Waters **Toxic Pollutants** (Table K-13, note 2)
  - Los Angeles River and tributaries above Los Angeles River Estuary\*

\*As required by the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL (Harbor Toxics TMDL), Los Angeles River Watershed responsible parties identified in effective metals TMDLs for Los Angeles River are responsible for conducting water and sediment monitoring above the Los Angeles River Estuary to determine the Rivers’ contribution to the impairments in the Greater Harbor waters<sup>2</sup>.

- Water Column Monitoring

<sup>1</sup> References given below are from the LA County MS4 Permit.

<sup>2</sup> Reference: Basin Plan, Chapter 7, Section 7-40.1, “Monitoring Plan”

- Water samples and total suspended solids samples shall be collected at, at least one site during two wet weather events and one dry weather event each year. The first large storm event of the season shall be included as one of the wet weather monitoring events. Water samples and total suspended solid samples shall be analyzed for metals, DDT, PCBs, and PAHs. Sampling shall be designed to collect sufficient volumes of suspended solids to allow for analysis of the listed pollutants in the bulk sediment.
- General water chemistry (temperature, dissolved oxygen, pH, and electrical conductivity) and a flow measurement shall be required at each sampling event. General chemistry measurements may be taken in the laboratory immediately following sample collection if auto samplers are used for sample collection or if weather conditions are unsuitable for field measurements.
- Sediment Monitoring
  - For sediment chemistry, sediment samples shall be collected at, at least one site every two years for analysis of general sediment quality constituents and the full chemical suite as specified in SQO Part 1. All samples shall be collected in accordance with SWAMP protocols.

The details including sampling locations and all methods must be specified in the City's revised Integrated Monitoring Program (IMP).

**Non-Stormwater Action Levels: (Attachment G)**

- Los Angeles River Watershed Management Area (Part II)
- Dominguez Channel Watershed Management Area (Part III)

**Municipal Action Levels: (Attachment G Part VIII)**

- Conventional Pollutants
- Metals

**CWA 303(d)-listed Pollutants not Addressed by a TMDL**

<b>Water Body</b>	<b>Parameter</b>
Dominguez Channel (lined portion above Vermont Ave)	Ammonia
	Diazinon
	Indicator Bacteria
Dominguez Channel Estuary (unlined portion below Vermont Ave)	Ammonia
	Coliform Bacteria
Compton Creek	Benthic- Macroinvertebrate Bioassessments