

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

IMP Reference	MRP Element	Comment and Necessary Revision	City Response
<b>General</b>			
		<p>The WMP acknowledges its participation in other Groups’ CIMPs (Lower San Gabriel River, Lower Los Angeles River, and Los Cerritos Channel) that are part of the LA County MS4 Permit. For clarity, please provide a table that lists all the receiving water sites from these other CIMPs to which the City of Long Beach has MS4 discharges, all the constituents that will be monitored (e.g. field measurements, Table E-2 constituents, aquatic toxicity, TMDL pollutants, 303(d) listed pollutants, etc.), and which City of Long Beach monitoring requirements and constituents each of the 4 CIMPs/IMPs is addressing.</p>	<p>The additional table is provided as requested. Three receiving water sites from the upper watersheds that drain directly into the City of Long Beach estuarine IMP drainage area also are Mapped in Figure 1-2. The fourth receiving water site from the Upper Los Angeles River does not drain directly into the LB estuarine area but drains into the Los Angeles river estuary at site S10 (Wardlow. However the Los Angeles River plume does effect the City’s beaches in San Pedro Bay.</p>
Section 1.2.3		<p>Section 1.2.3, page 14, 1st sentence of the IMP references Dominguez Channel twice. The 2nd sentence also references Dominguez Channel. Clarify that the actual reference is to Dominguez Channel Estuary (below Vermont Avenue).</p>	<p>Text has been clarified to indicate that the discharges are to the Dominguez Channel Estuary (below Vermont Avenue).</p>
Table 2-1 & 3-4		<p>Clarify the compliance method the City intends to use (i.e. compliance with sediment targets or compliance with SQO). If the compliance method will be direction comparison to sediment targets only, correct Table 2-1 footnote 7 of the IMP from “2.5 years” to “2 years”. Likewise, correct Table 3-4 footnote 2 of the IMP from “2.5 years” to “2 years” consistent with the TMDL requirement to monitor for general sediment quality constituents and the full chemical suite as specified in SQO Part 1 once every two years.</p> <p>If the SQO compliance method is chosen, ensure that the revised IMP includes monitoring for all three elements of the triad sampling at the appropriate frequency.</p> <p>Additionally, the reference to footnote 6 in Table 2-1 is missing. Please add.</p>	<p>The City expects to achieve compliance by using Sediment Quality Objectives (SQO) Part 1 assessment methods based upon interpretations and integration of multiple lines of evidence to determine if sediment is considered either <i>Unimpacted or Likely Unimpacted</i>. However, the City reserves the right to achieve compliance using any one of the three methods specified in the Permit.</p> <p>It has been clarified that monitoring will include all three elements of the triad sampling at a frequency of every 2 years and, if possible, be coordinated with SQO sampling being conducted throughout the Dominguez Channel Estuary and Greater Los Angeles and Long Beach Harbor Waters. Footnotes have been corrected.</p>

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Table 3-2		In Table 3-2 of the draft IMP, please include selenium, lead and zinc, which are listed as category 3 pollutants in the City’s WMP. Additionally, eliminate the constituents in Table 3-2 that have footnote 4, 5 and 6. Neither the Lower San Gabriel River CIMP nor the Upper San Gabriel River CIMP lists the referenced constituents as stated.	Appropriate additions and deletions were made to Table 3-2
Section 8		Under Section 8 of the IMP, Annual IMP Reports item c, please add “Municipal Action Levels (MALs)” to the list.	MAL report added to the list.
Appendix C		In Appendix C Table 1 of the IMP, move footnote 1 from SSC to PCBs.	Footnote corrected.
<b>Receiving Water Monitoring</b>			
Section 1.2.4 & Table 2-1	Part II.D.1 (page E-4)	The scope (frequency & type(s)) of monitoring at station LBR1 is unclear in Section 1.2.4 & Table 2-1 of the draft IMP. Table 2-1 does not appear to list any receiving water monitoring at station LBR1 even though LBR1 is listed as a receiving water site in Table 1- 1 of the draft IMP. Receiving water monitoring at this site should be included. Alternatively, provide a rationale for why receiving water monitoring at this station is not included.	<p>SQO testing is scheduled at LBR1 consistent with the schedule for SQO testing at R8 in the San Gabriel River Estuary. SQO testing is scheduled at LBR1 due to known issues in the sediment resulting from more rapid deposition of sediment.</p> <p>Secondly, receiving water sampling is scheduled to be conducted at LBR2 which is located a short distance from LBR1. This location within Alamitos Bay is more representative for estuarine water quality testing as influences within the Bay are included. However, this latter site is not suitable for SOQ testing as dredging occurs periodically at this site. Clarification is provided in the text and table.</p>
Table 1-1 & 2-1		<p>The IMP should acknowledge the final approved Colorado Lagoon TMDL Monitoring Plan dated 12/17/15. Additionally, please include the Colorado Lagoon TMDL Monitoring Plan as part of the attachments/appendix of the revised IMP.</p> <p>Table 1-1 of the IMP should include all the monitoring sites identified in the Colorado Lagoon TMDL Monitoring Plan. Additionally, Table 2-1 of the IMP should include Colorado Lagoon and indicate the monitoring frequency.</p>	<p>Colorado Lagoon TMDL Monitoring Plan is included as Appendix J.</p> <p>Colorado Lagoon monitoring stations have been included in the Text as Table 2-2 and monitoring stations have been shown on Figure 2-1.</p>

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Section 1.2.3		<p>Section 1.2.3 of the draft IMP states that there will be no monitoring for the two small drainages to Dominguez Channel Estuary due to the small drainage area and the similarity to the land use of the areas that will be monitored by the Bouton Creek Monitoring Station and the Termino Drain monitoring station.</p> <p>The Los Angeles Water Board will utilize the data from two monitoring sites indicated above to determine compliance with the Harbor Toxics TMDL.</p>	Comment noted.
Section 1.2.4	Part VI.A.1.b.ii (page E-11)	<p>The revised IMP should explain how and why monitoring at the proposed receiving water sites will provide representative measurement of the effects of the City’s MS4 on the receiving waters to which it discharges. As noted above, include in the revised IMP the receiving water monitoring sites in Colorado Lagoon. Also include in the revised IMP a description of the receiving water shoreline monitoring sites along the coastal San Pedro Bay beaches.</p>	Clarification has been provided and descriptions of the receiving water monitoring sites along the coastal San Pedro Bay beaches has been provided.
Table 3-3	Part VI.C.1.d & VI.D.1.c (page E-13 to E-14)	<p>Please make the following revisions for Table 3-3 of the IMP for Los Cerritos Channel Estuary and Alamitos Bay:</p> <ul style="list-style-type: none"> <li>• Footnote 3 should also specify that aquatic toxicity will be monitored for 1 of the 2 wet weather events during the first significant storm event of the storm year and for the month with the historically lowest flows.</li> <li>• Footnote 3 should specify aquatic toxicity testing at all outfall sites will be triggered by receiving water sites in Alamitos Bay and Los Cerritos Channel Estuary.</li> <li>• Correct table references for each category of constituents listed (e.g. Nutrients (Table 3-5) should be Nutrients (Table 3-7)).</li> <li>• Substitute BOD with cyanide as per information given in Section 3.1 of the IMP.</li> </ul>	Corrections made with the exception that water quality testing is not scheduled at LBR1 in the Los Cerritos Channel Estuary. As noted earlier, testing at this site is limited to SQO testing of the sediment.
Table 3-4	Part VI.C.1.d & VI.D.1.c (page E-13 to E-14)	<p>Please make the following revisions for Table 3-4 of the IMP for receiving water site San Gabriel River Estuary:</p> <ul style="list-style-type: none"> <li>• Add Nickel (a 303(d) listed pollutant) under metals.</li> <li>• Add monitoring 3 wet weather and 2 dry weather events for flow or clarify why flow will not be monitored.</li> </ul>	Corrections and additions made to table and text.

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		<ul style="list-style-type: none"> <li>• Add aquatic toxicity monitoring for 2 wet and 1 dry weather event. Specify in a footnote that monitoring will occur during the first significant storm event of the year for one of the wet weather events and the month with the historically lowest flows.</li> <li>• With consideration that the San Gabriel River, Estuary and Tributaries Indicator Bacteria TMDL will be effective in the for the next permit cycle, the Microbiological Constituents (Table 3-6) should be monitored for 3 wet weather and quarterly dry weather events.</li> <li>• Correct the table references for each category of constituents listed (e.g. metals (Table 3-6) should be metals (Table 3-8)).</li> </ul>	
Table 3-4	Part VI.C.1.e (page E-13)	Add monitoring of Table E-2 constituents for the first significant storm event and critical dry weather event for the first year. If a parameter is not detected at the Method Detection Limit (MDL) for its respective test method or the result is below the lowest applicable water quality objective, and is not otherwise identified in Attachment E Part VI.C.1.d & VI.D.1.c of the City of Long Beach Permit, it need not be further analyzed. If a parameter is detected exceeding the lowest applicable water quality objective then the parameter shall be analyzed for the remainder of the Order during wet weather at the receiving water monitoring station where it was detected. The same applies to dry weather.	Table E-2 monitoring has been added to the text and table.
<b>Storm Water Outfall Based Monitoring</b>			
	Part VIII.A.2.a (page E-19)	<p>The draft IMP does not explain how the stormwater outfalls proposed for monitoring were chosen. Please clarify if the stormwater outfalls are chosen with at least one major outfall per HUC-12 drainage area within the City’s jurisdiction or an alternative approach was used. The revised IMP should also provide justification on why the proposed outfalls best represent the land uses within the City’s jurisdiction. To provide sufficient justification, the City must provide a land use map that shows the catchment area (also known as the drainage area) for each outfall 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 the catchment area within the City that</li> </ul>	Landuse maps and justification for selection of stormwater outfall monitoring sites has been provided.

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		drains to each of the outfalls.	
Table 1-1		As per the Long Beach City Beaches and Los Angeles River Estuary TMDL for Indicator Bacteria, there are 16 monitoring sites that are in the City of Long Beach’s jurisdictional area. Station LARE is being monitored under the Lower Los Angeles River Group’s CIMP. Therefore, the IMP should cover the remaining 15 bacteria monitoring sites. However, As per Table 1-1 of the IMP, only 5 bacteria monitoring sites are proposed. Please include the other 10 monitoring sites in Table 1-1. Alternatively, please provide a rationale for why only 5 out of the 15 monitoring sites are proposed (e.g. open beach site/no MS4 outfall).	The Long Beach City Beaches and Los Angeles River Estuary TMDL for Indicator Bacteria was limited to recreational beaches west of the Belmont Pier. As a result, enhanced monitoring was limited to the five beaches in Table 1-1. Monitoring at the other sites will continue under the City’s AB411 monitoring program.
Section 1.2.3, 1.2, & Table 1-1		According to Table 1-1 and Section 1.2 and 1.2.3 of the draft IMP, outfall monitoring at LBE3 (Belmont Pump Station to Alamitos Bay) will be discontinued because 14 years of data is available. Furthermore, the IMP states that there are dry weather diversions to the sanitary system and marked improvement in compliance with bacteria limits. The revised IMP should provide additional justification for the discontinuation of monitoring at the location (e.g. no exceedances of any WQBELs at that outfall during wet and dry weather, or other outfalls in the HUC-12 adequately characterize MS4 discharges to Alamitos Bay).	Justification added.
Section 2		Section 2 of the draft IMP sub-heading “City Beach Bacterial Monitoring Program” mentions the installation of diversions (summer and winter dry weather). Please provide a map with locations of the diversions and a list indicating if any of those diversions are diverting flows from any of the 15 shoreline monitoring sites.	Map and coordinates has been added to identify sites with existing or planned diversions and locations relative to shoreline monitoring sites.
Section 2 & Table 2-1	Part VI.B.2.c (page E-11 to E-12)	The draft IMP proposes a bacteria indicator monitoring frequency of 2 times per week. However, the City of Long Beach MS4 Permit states for Shoreline Monitoring Stations monitored pursuant to a bacteria TMDL “Sampling for bacterial indicators (total coliform, fecal coliform (or E. coli), and enterococcus) at shoreline monitoring locations associated with an MS4 outfall and addressed by a TMDL shall be conducted 3-5 times per week at sites subject to the reference system criterion for allowable exceedance days, and weekly at sites subject to the antidegradation criterion for allowable exceedance days.” Note that as per the USEPA Long Beach City	The bacteria indicator monitoring frequency for the five TMDL sites located west of the Belmont Pier has been increased to 3 times per week. The four recreational monitoring sites located east of the Belmont Pier (B9, B64, B10 and B11) will continue to be monitored on a weekly basis. Three of these stations (B9, B64 and B10) remain subject to antidegradation criterion since the TMDL does not require any reduction in exceedances at these

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		<p>Beaches and Los Angeles River Estuary TMDL for Indicator Bacteria, sites B64, B65, B10, and B66 are subject to the antidegradation criterion for winter dry weather.</p> <p>The revised IMP should propose a monitoring frequency consistent with the requirements listed above.</p>	<p>locations in order to meet the reference beach criterion.</p> <p>Up until 2009 the City of Long Beach was monitoring 15 locations along the beach. In 2009, three years before the TMDL was completed, the monitoring program was reduced to the nine sites that are proposed for this monitoring program. Two of the sites eliminated in 2009 included B65 and B66 which were noted to be subject to antidegradation criterion. Nevertheless, three of the remaining sites will be assessed against antidegradation criteria. The one site not subject to antidegradation criteria is B10. This site is located adjacent to the Alamitos Bay Breakwater Entrance and is furthest from direct sources of runoff from the City of Long Beach MS4 system. Earlier studies suggested that this site is more impacted by floating trash and debris present in the surface water plume emanating from the Los Angeles River. Normal wind patterns tend to deposit these types of materials at this end of the beach where they become trapped due to the configuration of the breakwater and beach.</p> <p>Since 2009, the City has continued to monitor bacterial indicator at these nine sites thus it is appropriate to continue to utilize these nine shoreline sites for assessing compliance with the TMDL and build upon the current database.</p>

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Section 2		Section 2 of the IMP under “Outfall Stormwater Monitoring” should clarify that parameters in Table E-2 identified as exceeding the lowest applicable water quality objective in the nearest downstream receiving water monitoring station will be monitored for a 3 wet weather events per year.	Section has been revised to clarify inclusion of Table E-2 parameters that are found to exceed lowest applicable water quality objectives in the nearest downstream receiving water station.
Section 5.1	Part VIII.B.1.b.iii (page E-19)	The revised IMP should clarify that stormwater outfalls will be monitored during wet weather conditions resulting from the first rain event of the year, and at least two additional wet weather events within the same wet weather season.	Appropriate clarification provided.
Table 6-3	Part VII.A (page E-18)	Please ensure that all the components identified in Table 6-3 of the draft IMP are submitted as per the timelines indicated.	Comment noted. Please note that completion dates were changed from 2016 to 2017 since the original dates were based upon the original submission date of March 2015 for the IMP and many of the dates were already past due.
Table 6-3	Part VII.A (page E-18)	Although Figure 1-1 and 1-2 of the draft IMP show surface waterbodies, the IMP should provide a map that clearly labels each surface water body within the City’s jurisdiction covered by this IMP.	Map of surface waterbodies added for clarification.
Table 6-3	Part VII.A (page E-18)	Table 6-3 footnote number 2 of the IMP references shapefiles. However, no shapefiles have been submitted. Please provide the shapefiles.	Footnote will be changed to indicate information is in an Excel spreadsheet and the spreadsheet has been provided.
Table 6-3	Part VII.A (page E-18)	Table 6-3 of the draft IMP marks the location of all dry weather diversions as complete. However, the IMP does not include a map with the locations of all dry weather diversions. Please provide the locations.	As noted earlier, a map and coordinates has been added.
	Part VIII.C.1 (page E-20)	As per Appendix A of the IMP, auto-samplers will be used. The revised IMP should clarify that samples shall be collected during the first 24 hours of the stormwater discharge or for the entire stormwater discharge if it is less than 24 hours.	Clarification has been added with the exception that efforts will be made to capture 100 percent of the runoff associated with a given rainfall event in order to assure data consistent with historical data records and to allow for better interpretation.
<b>Non-Storm Water Outfall Based Monitoring</b>			
Section 1.2.5	Part IX.B.1 (page E-21)	Section 1.2.5 of the IMP states that outfalls with significant non-stormwater flow will be identified on the basis of 3 outfall screening surveys. Please specify what the criteria are for a significant non-stormwater discharge and whether the criteria need to be met for all 3 screening surveys for the non-	During inspections, flow is measured at each flowing outfall. Criteria for determination of significant flow will be provided consistent with criteria developed for the Los Cerritos Channel

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		stormwater discharge to be considered a significant non-stormwater discharge.	Freshwater Watershed (See Appendix K). This approach develops a significant criteria based upon significant flows based upon long term measurements of dry weather base flows in the watershed (gal/acre/day). Significant flows were defined as being %50% larger than the base flow adjusted to the acreage of the outfall drain.
Section 2	Part IX.C.1 (page E-22)	Section 2 of the IMP under sub-heading “Non-Stormwater Outfall Monitoring Program”, it states that “ <i>outfalls with significant non- tidal flow will be classified for further investigation</i> ”. The IMP should be revised to define significant non-tidal flow.	Clarification has been provided.
Section 6.1	Part IX.C.1 (page E-22)	Section 6.1 of the draft IMP categorizes a significant discharge with high/low flow and physical indicators, but insufficient detail is provided on the criteria/thresholds for flow or physical indicators. Add specificity to the revised IMP regarding how a significant non- stormwater discharge will be defined/determined. In particular, provide greater specificity on thresholds for field measurements, including flow and water quality data that will be used to determine whether the non-stormwater discharge is significant. Also, please define “high flow” which is referenced for “Suspect Discharge”.	Clarification has been provided
Section 6.1.5	Part IX.G.4-5 (page E-25)	Section 6.1.5 of the IMP states that “ <i>if monitoring demonstrates that discharges do not exceed any WQBELs, non-stormwater action levels, or water quality standards for pollutants identified on the 303(d) list after the first year, monitoring of the pollutants meeting all receiving water limitations will no longer be necessary.</i> ” As per the City of Long Beach MS4 Permit, the City must submit a written request to the Executive Officer to reduce or eliminate monitoring of specified pollutants based on an evaluation of the monitoring data.	Comment acknowledged and text has been modified.
<b>Aquatic Toxicity</b>			
Section 4.5		Section 4.5 of the IMP states that monitoring for constituents identified in the TIE “ <i>will occur as soon as feasible following the completion of a successful TIE (i.e., the next monitoring event that is at least 45 days following the toxicity laboratory’s reports transmitting the results of a successful TIE).</i> ”	The August 07, 2015 clarification memo states “ <b>at least 45 days following the original sample collection</b> ”. However, text has been modified to reflect the need to closely track progress of the TIE and to be prepared to implement upstream

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		Please revise this statement substituting “45 days following the toxicity laboratory’s report transmitting the results of a successful TIE)” with “45 days following the initial sampling event” consistent with the August 07, 2015 clarification memo.	monitoring as rapidly as possible consistent with the intent of the Regional Boards clarification memo.
Sensitive Species Selection	Part XII.G.3	The three-species screening process described in Part XII.G.3. (Page E-29) of the MRP must be followed at each of the receiving water sites to identify the most sensitive species. The Permittee suggests screening two species for sensitivity and mentions issues of practicality or logistics which limit the ability to test using other species. We suggest consulting the State Water Resources Control Board 2011 publication, “Implementation Guidance: Toxicity Testing for Stormwater” to gain insight on how to run chronic toxicity tests on marine wet weather samples.	The IMP proposed screening receiving water quality samples for toxicity using two species to determine the most sensitive species for these sites based upon available information on the sensitivity of these species to typical stormwater pollutants. Species were also selected based upon discussions among other permittees with discharges to marine waters. The proposed program is consistent with approved monitoring for other stormwater discharges regulated under the Los Angeles County MS4 permit.