
Los Angeles Regional Water Quality Control Board

October 27, 2014

Ms. Gail Farber, Director
County of Los Angeles
Department of Public Works
Watershed Management Division, 11th Floor
900 South Fremont Avenue
Alhambra, CA 91803

Ms. Gail Farber, Chief Engineer
Los Angeles County Flood Control District
Department of Public Works
Watershed Management Division, 11th Floor
900 South Fremont Avenue
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REVIEW OF THE ALAMITOS BAY/LOS CERRITOS CHANNEL WATERSHED MANAGEMENT AREA DRAFT 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 Ms. Farber:

The Regional Water Board has reviewed the draft Watershed Management Program (WMP) submitted on June 30, 2014 by the County of Los Angeles and Los Angeles County Flood Control District for the Alamitos Bay/Los Cerritos Channel Watershed Management Area. 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 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 storm water and non-storm water 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 Permit and must be approved by the Regional Water Board.

As stated above, on June 30, 2014, the County of Los Angeles (County) and the Los Angeles County Flood Control District (LACFCD) submitted a draft Watershed Management Program (WMP) for the Alamitos Bay/Los Cerritos Channel (AB/LLC) Watershed Management Area (WMA) to the Regional Water Board pursuant to Part VI.C.4.c of the LA County MS4 Permit.

Subsequent to submittal of the draft WMP, Regional Water Board staff met with the County and LACFCD on September 15, 2014, to discuss the AB/LLC WMP.

The Regional Water Board has reviewed the draft WMP and has determined that, for the most part, the draft WMP includes the elements and analysis required in Part VI.C of the LA County MS4 Permit for the 95-acre County Island within the AB/LCC WMA. However, some revisions to the County's and LACFCD's draft WMP are necessary, including additional analyses related to the remainder of the subwatershed areas addressed by the draft WMP, which includes the Los Cerritos Channel Estuary, Colorado Lagoon, Alamitos Bay and San Pedro Bay. The Regional Water Board's comments on the draft WMP, including detailed information concerning necessary revisions to the draft WMP and the Reasonable Assurance Analysis, are found in Enclosure 1 and Enclosure 2, respectively. The specific Permit provisions cited in the enclosures refer to provisions in the LA County MS4 Permit. The LA County MS4 Permit includes a process through which revisions to the draft WMP can be made (Part VI.C.4 in the LA County MS4 Permit). The process requires that a final WMP, revised to address Regional Water Board comments, must be submitted to the Regional 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 WMP as identified in the enclosures to this letter and submit the revised WMP as soon as possible and no later than **January 27, 2015**.

The revised WMP must be submitted to losangeles@waterboards.ca.gov with the subject line "LA County MS4 Permit – Revised Draft AB/LLC WMP" with a copy to Ivar.Ridgeway@waterboards.ca.gov and Rebecca.Christmann@waterboards.ca.gov.

If the necessary revisions are not made, the County and the LACFCD will be subject to the baseline requirements in Part VI.D of the Order 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 Attachments N and Q pursuant to subparts VI.E.2.d.i.(1)-(3) and VI.E.2.e.i.(1)-(3), respectively.

Until the draft AB/LLC WMP is approved, the County and LACFCD are required to:

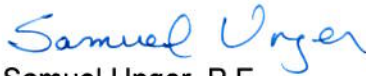
- (a) Continue to implement all watershed control measures in its existing storm water management programs, including actions within each of the six categories of minimum control measures consistent with Title 40, Code of Federal Regulations, section 122.26(d)(2)(iv);
- (b) Continue to implement watershed 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); and
- (c) Target implementation of watershed control measures in (a) and (b) above to address known contributions of pollutants from MS4 discharges to receiving waters.
- (d) Implement watershed control measures, where possible from existing TMDL implementation plans, to ensure that MS4 discharges are achieving compliance with interim WQBELs for the Colorado Lagoon TMDL and the Harbors Toxics TMDL pursuant to Part VI.E and set forth in Attachments N and Q consistent with the compliance deadline of December 28, 2012.

In addition on June 30, 2014, the County and the LACFCD submitted a draft Coordinated Integrated Monitoring Program (CIMP) for the AB/LLC WMA to the Regional Water Board

pursuant to Part IV.C of Attachment E of the LA County MS4 Permit. The Regional Water Board review and comments on the draft CIMP will be provided under separate cover.

If you have any questions, please contact Ms. Rebecca Christmann of the Storm Water Permitting Unit by electronic mail at Rebecca.Christmann@waterboards.ca.gov or by phone at (213) 576-5734. Alternatively, you may also contact Mr. Ivar Ridgeway, Chief of the Storm Water Permitting Unit, by electronic mail at Ivar.Ridgeway@waterboards.ca.gov or by phone at (213) 620-2150.

Sincerely,



Samuel Unger, P.E.
Executive Officer

cc: Angela George, Los Angeles County Flood Control District
Jolene Guerrero, County of Los Angeles, Department of Public Works
Bill Johnson, County of Los Angeles, Department of Public Works

Enclosures: Summary of Comments and Required Revisions
Memorandum on Reasonable Assurance Analysis

Los Angeles Regional Water Quality Control Board

**Attachment to October 27, 2014 Letter Regarding the Alamitos Bay/Los Cerritos Channel
Watershed Management Area Draft Watershed Management Program,
Pursuant to Part VI.C of the LA County MS4 Permit (Order No. R4-2012-0175)**

Summary of Comments and Required Revisions to the Draft Watershed Management Program

LA County MS4 Permit Provision	Summary of Comments and Necessary Revisions
<p>Part VI.C.5.a.i Water Quality Characterization</p>	<p>The geographical scope of this WMP includes both the 95-acre County Island and LACFCD infrastructure in the Los Cerritos Channel freshwater subwatershed as well as the LACFCD infrastructure within the Los Cerritos Channel Estuary subwatershed and the Alamitos Bay subwatershed. Therefore, the WMP needs to present and evaluate water quality data for the Los Cerritos Channel Estuary, Colorado Lagoon, Alamitos Bay and San Pedro Bay, if available. Monitoring data that should be evaluated in the revised WMP include TMDL monitoring data for the Colorado Lagoon; bacteria data for Alamitos Bay; Bight data for San Pedro Bay; SWAMP data for Los Cerritos Channel Estuary; and any other data from CEDEN for Los Cerritos Channel, Los Cerritos Channel Estuary, Alamitos Bay and San Pedro Bay.</p> <p>It appears that the data for diazinon during wet weather may be missing from Table 1 on page B-3.</p>
<p>Parts VI.C.5.a.ii(1) and iv(1) Water Body-Pollutant Classification</p>	<p>The WMP needs to address the copper dry weather waste load allocation. Copper is listed in Table 3 as a Category 1 pollutant during both wet and dry conditions, but does not appear to be further addressed in the WMP, including the RAA. The WMP needs to identify the interim and final compliance deadlines of September 30, 2023 for the wet weather waste load allocation and dry weather waste load allocation, respectively.</p> <p>In addition, the WMP needs to include and address in the RAA all applicable water quality-based effluent limitations (WQBELs) to comply with provisions of Part VI.E and Attachment Q related to the Colorado Lagoon OC Pesticides, PCBs, Sediment Toxicity, PAHs and Metals TMDL and Attachment N related to the Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL, which apply to the LACFCD for direct discharges to Colorado Lagoon and San Pedro Bay, respectively.</p> <p>In Section 2.2, the draft WMP states, “As recognized by the footnote in Attachment K-7 of the Permit, the County and the</p>

LA County MS4 Permit Provision	Summary of Comments and Necessary Revisions
	<p>LACFCD have entered into an Amended Consent Decree with the United States and the State of California, including the LARWQCB, pursuant to which the LARWQCB has released the County and the LACFCD from responsibility for Toxic pollutants in the Dominguez Channel and the Greater Harbors.”</p> <p>This statement misinterprets the Regional Water Board’s findings. Footnote 1 to Table K-7 of the LA County MS4 Permit states, “The requirements of this Order to implement the obligations of this TMDL do not apply to a Permittee to the extent that it is determined that the Permittee has been released from that obligation pursuant to the Amended Consent Decree entered in United States v. Montrose Chemical Corp., Case No. 90-3122 AAH (JRx).” As stated in the responses to comments received on the Dominguez Channel and Greater Harbor Waters Toxic Pollutants TMDL, “...primarily one pollutant, DDT, is associated with the Superfund site and also addressed by the TMDL. The TMDL addresses numerous pollutants and utilizes a different process than Superfund. The other pollutants – heavy metals, PAHs, PCBs and other legacy pesticides are not within Superfund’s focus at the Montrose OU2 Site...”</p> <p>Further, the WQBELs applicable to the County and LACFCD pursuant to the TMDL, which are in Attachment N, Part E of the LA County MS4 Permit, are for ongoing discharges from the MS4, not for the historic contamination of the bed sediments. Therefore, the statement in the draft WMP incorrectly concludes that the aforementioned Consent Decree releases the County and LACFCD from any obligation to implement the WQBELs in Attachment N, Part E.</p>
<p>Part VI.C.5.a.ii(2) and iv(2) Water Body-Pollutant Classification</p>	<p>The WMP needs to specify the applicable receiving water limitations for the Category 2 water body pollutant combinations (WBPCs) listed in Table 2. In addition, pH needs to be added to the list of Category 2 pollutants in Table 2.</p> <p>The WMP needs to address the pollutants identified on the State’s Clean Water Act Section 303(d) List for Colorado Lagoon (indicator bacteria, which was not addressed by the Colorado Lagoon TMDL); and the 303(d) listing for indicator bacteria in Alamitos Bay.</p>
<p>Part VI.C.5.a.ii(3) and iv(2) Water Body-Pollutant Classification</p>	<p>The WMP needs to specify the applicable receiving water limitations for the Category 3 WBPCs. In addition, the WMP needs to include the rationale for not including aluminum as a Category 3 pollutant.</p> <p>The WMP needs to evaluate and address other pollutants that are otherwise causing or contributing to an exceedance of Receiving</p>


LA County MS4 Permit Provision	Summary of Comments and Necessary Revisions
	Water Limitations in Los Cerritos Channel Estuary, Colorado Lagoon, Alamitos Bay and San Pedro Bay, if any.
Part VI.C.5.a.iii Source Assessment	The WMP needs to include a source assessment regarding known and suspected storm water and non-storm water pollutant sources in discharges to the MS4 and from the MS4 to receiving waters. The source assessment should include (1) a discussion of findings from implementation of the minimum control measures under the 2001 Permit; (2) a discussion of the data and conclusions from the TMDL source investigations; and (3) TMDL monitoring data for Colorado Lagoon from the LACFCD storm drain.
Part VI.C.5.a.iii.(1)(b) Source Assessment	<p>The WMP needs to identify on a map the County's MS4s within the County Island; catch basins and major outfalls for the County and LACFCD in the Los Cerritos Channel subwatershed; and catch basins and major outfalls for the LACFCD in the Los Cerritos Channel Estuary subwatershed and the Alamitos Bay subwatershed. Regional Water Board staff is aware that the CIMP identifies 4 outfalls to the Los Cerritos Channel, 2 or 3 of which are potentially major outfalls (Figure 13, Table 6, pp. 23-24). However, the WMP should include this information as well.</p> <p>In Figure 2 of the WMP, the Palo Verde Drain appears to be depicted in the wrong location.</p>
Part VI.C.5.a.iv. Prioritization	The WMP needs to prioritize and address the Category 2 and 3 WBPCs for the Los Cerritos Channel Watershed.
Part VI.C.5.a.iv.(1) Prioritization	<p>The WMP needs to provide a clear schedule that demonstrates implementation of the BMPs will achieve the required interim metal reductions by the compliance deadlines. In addition, justification and supporting data is required to support the expected reductions in pollutant loads.</p> <p>The WMP needs to specify a strategy to achieve the final water quality-based effluent limitations for the Colorado Lagoon Toxics TMDL and demonstrate that the interim WQBELs for chlordane, dieldrin, lead, zinc, DDT, PAHs, and PCBs in sediment have been achieved.</p>
Part VI.C.5.a.iv.(2)(a) Prioritization	The County plans to implement connector pipe screen devices on the 4 catch basins within the County Island by July of 2017; justification is needed to demonstrate that this schedule is as short as possible.
Part VI.C.5.b.ii.(1) Selection of Watershed Control Measures	The WMP needs to specify a strategy that will be implemented to prevent or eliminate non-storm water discharges, if necessary based on the findings of the non-storm water screening program.
Part VI.C.5.b.iv.(3) Selection of Watershed Control Measures	The WMP needs to include the implementation actions to be carried out by the LACFCD or jointly by LACFCD and the City of Long Beach that have been proposed in the Colorado Lagoon Restoration Project and that will be implemented to achieve compliance with

LA County MS4 Permit Provision	Summary of Comments and Necessary Revisions
<p>Part VI.C.5.b.iv.(4)(a) Selection of Watershed Control Measures</p>	<p>the interim and final WQBELs for the Colorado Lagoon Toxics TMDL.</p> <p>The AB/LCC group is submitting the WMP to satisfy the Implementation Plan requirement of the Los Cerritos Channel (LCC) Metal TMDL. The WMP discusses existing and planned non-structural BMPs that will be implemented and potential structural BMPs that may be implemented if necessary to achieve the WLAs for copper, lead, and zinc along with the assumed pollutant reductions. However, the WMP needs to provide peer-reviewed data and/or modeling output to support the expected reduction in pollutant load, in order to demonstrate compliance with the interim WLAs that must be met by 2017 and 2020, as specified in the LCC Metals TMDL Implementation Plan. Where the AB/LCC group relies on the analysis of another group or previous implementation plan, such as the Ballona Creek Multi-pollutant Implementation Plan, the AB/LCC group should reiterate the analysis/findings in the revised WMP.</p> <p>The WMP needs to include control measures to achieve the interim and final WQBELs for the Colorado Lagoon Toxics TMDL and the interim WQBELs for the Harbors Toxics TMDL for direct discharges into San Pedro Bay.</p>
<p>Part VI.C.5.b.iv.(4)(b)-(d) Selection of Watershed Control Measures</p>	<p>The WMP states, "Over the next few years, the County will upgrade a portion of its mechanical broom street sweepers with new high efficiency vacuum street sweepers."</p> <p>In addition, the WMP states, "The County plans to implement CPS devices on the 4 catch basins within its jurisdiction in the AB/LCC WMA by July of 2017. Construction of the CPS devices is contingent upon appropriate field conditions and a thorough design review. CPS devices cannot be installed in areas where they may adversely affect flood protection or in catch basins that are too shallow to house CPS devices." The WMP needs to clearly identify when the 4 catch basins will be assessed as to whether a CPS device is feasible. The WMP needs to include a contingency if the CPS device cannot be installed in one or more of the catch basins.</p> <p>The revised WMP needs to provide more specificity with regards to the schedule of implementation for these watershed control measures that demonstrates compliance with the interim compliance deadlines for metals.</p> <p>In addition, the revised WMP needs to address how the LACFCD will comply with the trash requirements for catch basins and outfalls in the Los Cerritos Channel Estuary subwatershed and the Alamitos Bay subwatershed.</p>

LA County MS4 Permit Provision	Summary of Comments and Necessary Revisions
<p>Part VI.C.5.b.iv.(5) Reasonable Assurance Analysis</p>	<p>The WMP modeled the critical condition, the daily pollutant loads for Cu, Pb, and Zn during wet weather, and the required wet weather load reduction. However, the calculated load reductions were done incorrectly. Since the 95-acre County Island is about 1% of the entire Los Cerritos Channel watershed; then the County's portion of the WLAs is 1%. In addition, the RAA did not address the non-storm water copper WLAs or other pollutants in Category 1 for the Colorado Lagoon Toxics TMDL and Harbors Toxics TMDL. The Reasonable Assurance Analysis (RAA) needs to address all applicable WQBELs in Attachments N and Q and other applicable waterbody-pollutant combinations falling within Categories 2 and 3. (See also detailed comments on the County's RAA in the attached memorandum.)</p>
<p>Part VI.C.5.c Compliance Schedules</p>	<p>The WMP needs to demonstrate that the interim deadlines are being or will be achieved. In addition, the WMP needs to include the interim and final compliance deadlines for September 30, 2023, for the wet weather waste load allocation and dry weather waste load allocation, respectively.</p>

Los Angeles Regional Water Quality Control Board

TO: Bill Johnson, P.E.
Alamitos Bay/Los Cerritos Channel Watershed Management Program

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

DATE: October 24, 2014

SUBJECT: COMMENTS ON SECTION 5, REASONABLE ASSURANCE ANALYSIS, OF
THE DRAFT WATERSHED MANAGEMENT PROGRAM FOR THE ALAMITOS
BAY/LOS CERRITOS CHANNEL WATERSHED MANAGEMENT AREA

This memorandum contains comments on Section 5, Reasonable Assurance Analysis, of the Alamitos Bay/Los Cerritos Channel Watershed Management Program, dated June 28, 2014, which was submitted by the Los Angeles County Flood Control District (LACFCD) and the County of Los Angeles Department of Public Works (County) for the 95-acre County unincorporated land area within the Los Cerritos Channel Freshwater Watershed and the LACFCD's storm drains and other appurtenant drainage infrastructure within the Los Cerritos Channel Freshwater Watershed, Los Cerritos Channel Estuary Watershed, and Alamitos Bay Watershed.

A. General comments on the draft Reasonable Assurance Analysis (RAA) section of the draft Watershed Management Program.

1. The Alamitos Bay/Los Cerritos Channel Group (AB/LCC Group) are subject to final water quality-based effluent limitations pursuant to Attachment N, Part E "Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL", and Attachment Q, Part A "Los Cerritos Channel Metals TMDL", Part B "Colorado Lagoon OC Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals TMDL."

Pursuant to Part VI.C.5.a.iv(1) and VI.C.5.b.iv, pages 60 and 62-63 of the MS4 Permit, the AB/LCC Group are required to prepare reasonable assurance analysis to demonstrate that the WQBELs that are established in the Colorado Lagoon OC Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals TMDL shall be achieved through implementation of the watershed control measure proposed in the WMP. However, the Colorado Lagoon OC Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals TMDL was completely omitted from the draft WMP. The draft WMP did not include and analyze a strategy to implement pollutant controls necessary to achieve 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 in the Colorado Lagoon OC Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals TMDLs.

Alamitos Bay/Los Cerritos Channel Watershed Management Area

2. The AB/LCC Group used historic data from the Stearns Street Mass Emission Station to determine Category 3 and low priority pollutants, which is only appropriate to identify pollutants of concern for the freshwater portion of the Los Cerritos Channel. There is no data analysis or information provided for high priority (Category 2) and medium priority (Category 3) pollutants of concern for Los Cerritos Channel Estuary Watershed and Alamitos Bay Watershed.
 3. The AB/LCC Group had identified water quality priorities for Los Cerritos Channel but not for Colorado Lagoon and East San Pedro Bay, where the following drains discharge to: LACFCD Project 452 Drain (Colorado Lagoon), BI 5151 U2 - Line A - Long Beach, BI 0450 - line G - Alamitos Bay, BI 5101 U2 - Line A - Long Beach, and BI 0450 - Line A - Alamitos Bay. Pursuant to Section VI.C.5.a., the WMP should include an evaluation of existing water quality conditions, classify them into categories, identify potential sources, and identify strategies, control measures, and BMPs as required in the permit.
 4. The TMDL allowable daily loads for metals applicable to the County Island were incorrectly calculated. The calculated TMDL allowable load did not take into account that the County Island area only covers 95 acres, which is approximately 1% of the LCC Freshwater Watershed area covered under the LA County MS4 Permit to which the assigned LA County MS4 Permittees' WLA applies. (The areal extent of the watershed area covered by the LA County MS4 Permit is 9,470 acres.) Table 5 on page 18 of the draft WMP needs to be revised to include the correct TMDL allowable loads for the County Island, specifically, and recalculated required pollutant load reductions. (Also, the table needs to be corrected to state that the TMDL establishes an allowable daily load; the allowable loads for lead and zinc are presented as annual loads not daily loads.) Identification of potential BMPs and modeling of these BMP scenarios for the reasonable assurance analysis to ensure the required reductions are achieved should also be revised accordingly.
- B. Modeling comments regarding analysis of copper, lead and zinc concentrations / loads:
1. The model domain used for predicting flow volume and pollutant loading is limited in the County Island area, which is located within WMMS subbasin 5505. As such, the model prediction did not take upstream and neighboring hydrological contribution of flow and pollutant loading into account. This is based on the assumption that these surrounding flows and pollutant loading will be addressed by the Los Cerritos Channel Watershed Management Program submitted by other LA County MS4 Permittees.
 2. The model predicted flow volume appears to be used as an indicator of required pollutant load reductions for wet weather condition. Thus, the predicted flow volume becomes a very important parameter for evaluating each BMP's performance and required load reductions. In addition to Figures 6 and 7, the model results of daily storm flow volume originating from County Island and the frequency analysis should be presented in tabular form to identify the predicted 90th percentile daily flow volume. Additionally, more description should be presented in the report regarding how the daily pollutant loads for copper, lead, and zinc from the County Island were derived, as identified on page 17.

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. If hydrology data are not currently available, the necessary data should be collected so that the model can be calibrated and/or validated during the adaptive management process. Water quality data are available from the Stearns Street mass emission station, which could be used for water quality calibration.
4. For the baseline condition, per RAA Guideline, in Table 5 on pages 20-21, the model predicted concentrations for copper, lead, and zinc under the wet weather critical condition should be presented in the table in addition the baseline loads for the County Island.
5. The required reduction targets in pollutant load from baseline identified in Table 5 of the Report for wet weather should be explained in more detail and also presented in time series as the difference of baseline concentrations/loads from allowable concentrations/loads of each pollutant under long term continuous simulation. Further, as described earlier, the TMDL allowable loads presented in Table 5 appear to be incorrect as well as the required load reductions, which are derived from the baseline loads and allowable loads.
6. The report did not provide predicted pollutant concentrations in the receiving water or at the downstream outlets of the County Island to demonstrate that receiving water limitations will be achieved.
7. The ID number for subbasin 5505 and each neighboring subwatershed used in the model simulation must be provided and be shown in the simulation domain to present the geographic relationship of the subwatersheds simulated in the LSPC model.
8. The flow and water quality time series output at the watershed outlet must be provided using the 90th percentile of modeled pollutant concentration and mass per day for wet event days consistent with the expression of the WQBELs 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).
9. While copper is identified in Table 3 as a Category 1 pollutant in both wet and dry weather conditions, model simulation for copper in Los Cerritos Channel under the dry weather condition was not included in the RAA.
10. Per the RAA Guidelines, the required load reductions to achieve interim and final WQBELs per the required compliance deadlines should be evaluated at the jurisdictional boundary of each subwatershed to demonstrate that the proposed control measures will ensure that each Group'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 Section 5.2.5 of the Report. Section 5.2.6 of the draft WMP does not clearly present, or analyze in the RAA, the BMP scenarios to meet the interim compliance deadlines in 2017, 2020 or 2023 during wet weather conditions or the interim deadlines in 2017 and 2020 and the final deadline in 2023 during dry weather conditions.

- 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 lead, zinc, DDT, PAHs, PCBs, Chlordane and Dieldrin in sediment discharged from the MS4 to Colorado Lagoon, and for total copper, lead, zinc, PAHs, DDT, and PCBs for San Pedro Bay 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. Baseline loading and required reductions for Category 2 and Category 3 pollutants, including but not limited to 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.