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HAND DELIVERED

May 7, 2012

Mr. Samuel Unger
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Attention: Mr. Man Voong

Dear Mr. Unger:

TECHNICAL COMMENTS ON THE PROPOSED AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE LOS ANGELES REGION TO REVISE THE TMDL FOR BACTERIA FOR BALLONA CREEK, BALLONA ESTUARY, AND SEPULVEDA CHANNEL

On March 23, 2012, the California Water Quality Control Board Los Angeles Region (Regional Board) released proposed amendments to the *Water Quality Control Plan for the Los Angeles Region* (Basin Plan) to revise the Bacteria Total Maximum Daily Load (TMDL) for Ballona Creek, Ballona Estuary, and Sepulveda Channel. The City of Los Angeles, Bureau of Sanitation (Bureau) appreciates the opportunity to provide technical comments and recommendations to the Regional Board on the TMDL revisions.

The Ballona Creek Bacteria TMDL was the first freshwater bacteria TMDL that included urban areas under the City's jurisdiction. The Bureau led a stakeholder process through CREST (Cleaners Rivers through Effective Stakeholder-led TMDLs)[1] which assisted Regional Board staff with creating the Implementation Strategy section of the TMDL. Numerous stakeholder meetings were conducted, an array of technical issues were addressed, and the CREST work products were an important resource for Regional Board staff. The stakeholder process also provided many "lessons learned" for the Bureau and CREST, which were critical for the CREST-led development of the Los Angeles River Bacteria TMDL.

[1] For more information on CREST, see www.crestmdl.org .

Soon after TMDL adoption, the Bureau began the process of developing the Implementation Plan (IP) for the Ballona Creek Bacteria TMDL. Using an Integrated Water Resources Management (IRWM) approach, the IP was developed with intensive inter-agency and stakeholder collaboration. In coordination with Caltrans and the cities of Beverly Hills, Culver City, Inglewood, Santa Monica, and West Hollywood, the IP was submitted to the Regional Board on November 25, 2009. While the dry weather compliance date is less than one year away (April 27, 2013), the draft IP is still under review and we are eager to receive the Regional Board's comments on our proposed IP.

We thank the Regional Board staff for the time and energy contributed to the TMDL re-opener process. Re-openers are a critical component of the TMDL implementation process, as there are often significant data gaps and science evolves over the course of implementation schedules. This is especially the case for bacteria TMDLs – which may be the most challenging TMDLs for the City to implement – given, for example, the myriad of potential sources, large wet weather volumes, and the fact that bacteria water quality objectives (WQOs) have been in the process of being revised by USEPA since 2004. Reopeners ensure that public resources are directed at efforts that match the latest science.

While the proposed revisions to the Ballona Creek TMDL have made strides to incorporate the latest science, the Bureau has remaining concerns and hopes the comments herein will result in constructive changes to the proposed amendments to the Basin Plan. A comment matrix is provided in Attachment A, which includes additional technical background, details for several of our comments/recommendations, and additional comments not discussed herein.

GENERAL BACTERIA TMDL REOPENER ITEMS THAT THE BUREAU SUPPORTS

There are several revisions that were made to both the Ballona Creek Bacteria TMDL and the beach TMDLs, which are referred to herein as "general bacteria TMDL reopener items." For these general reopener items, the comments herein are mirrored in the Bureau's comment letter for the beach TMDLs. The Bureau would like to express its support for many of these revisions, as follows:

- **Establishing that the City's Implementation Plans represent an Integrated Water Resources Management (IWRM) approach:** the bacteria TMDLs that are being revised by the Regional Board allowed for slightly extended wet weather compliance schedules if responsible jurisdictions used an IRWM approach for their Implementation Plans. The Bureau went through considerable effort, including stakeholder processes, to ensure its Implementation Plans qualified as IRWM approaches. The Bureau supports the Regional Board's modifications of the wet weather TMDL compliance schedules (year 2021 instead of 2017) to reflect IRWM timelines.
- **Revision of Allowable Exceedance Days based on Updated Reference Site Data:** when the Ballona Creek Bacteria TMDL was adopted, it was acknowledged that the marine reference site at Leo Carrillo Beach was not representative of freshwater

conditions. However, at the time no freshwater reference site data were available. During development of the Los Angeles River Bacteria TMDL, CREST compiled freshwater reference watershed data from the Southern California Coastal Waters Research Program (SCCWRP), and calculated the corresponding number of freshwater Exceedance Days. The Bureau supports the incorporation of freshwater reference data into the Ballona Creek Bacteria TMDL.

- **Geometric mean calculation does not require "filled-in" values:** for the Ballona Creek Bacteria TMDL, the current practice as specified in the Coordinated Monitoring Program (CMP) is to "fill in" concentration values on days when samples are not collected in order to calculate a geometric mean on a daily basis. The fill-in, or daily, calculation approach is cumbersome and unnecessary to protect human health. The Bureau supports the Regional Board's decision to use a calculation approach that does not require filled-in values while maintaining the same level of human health protection.
- **Allowance for special studies to better represent non-detect samples:** it is common to measure bacteria concentrations that are below the method detection limit, particularly in Ballona Creek Estuary. The current practice is to substitute the detection limit for non-detect samples, but for enterococcus the detection limit (10 MPN/100mL) is relatively close to the TMDL target for the marine geometric mean (35 MPN/100mL). As such, some geometric mean exceedances may be an artifact of detection limit substitution as opposed to poor water quality. The Bureau supports the Regional Board's acknowledgement of this issue and allowance to submit special studies to facilitate substitution of alternative values for non-detect samples.
- **Changing compliance with geometric mean targets to reflect wet weather compliance dates:** the previous BPA included the concept of a "dry weather geometric mean" which was misrepresentative because the calculation reflected a long-term condition but with many days potentially excluded. The Bureau supports the Regional Board's decision to link geometric mean compliance with the final compliance dates (after both dry and wet weather allocations must be attained).

GENERAL BACTERIA TMDL REOPENER ITEMS FOR WHICH THE BUREAU REQUESTS CHANGES

While the Regional Board's TMDL revisions are appreciated and important to the TMDL process, there are several general bacteria TMDL reopener issues for which the Bureau requests changes. The following sub-sections include three general comments/changes that are critical to the City's ability to successfully implement bacteria TMDLs including the Ballona Creek Bacteria TMDL. These comments will also allow the TMDL to accurately reflect the latest science and to discern MS4 discharges from other sources. The comment matrix in Attachment A contains additional comments.

Major General Comment #1) ***Revisions to the Ballona Creek Bacteria TMDL should not be limited to the specific elements identified at the time of original TMDL adoption:***

As noted in Staff Report and Public Notice, the Regional Board has focused on specific reconsideration elements, rather than conducting a general reconsideration of the Ballona Creek TMDL and the high priority issues that may affect them. As such, the current reopener is potentially limited in nature and scope. Since the development of the Ballona Creek Bacteria TMDL, the Regional Board staff and responsible jurisdictions have learned many lessons regarding TMDLs and their implementation. These lessons have come during implementation of projects to reduce discharges of bacteria, and from development of subsequent TMDLs including the Los Angeles River Bacteria TMDL. Furthermore, it seems unreasonable to assume the list of high priority reopener issues for the Ballona Creek TMDL is the same now as it was when developed over six years ago in 2006. Finally, there are instances in the TMDL revisions where the Regional Board expanded the scope to include items beyond the original reconsideration elements. For example, monitoring was not a reconsideration element for the Ballona Creek Bacteria TMDL, but the Regional Board has nonetheless added additional monitoring requirements to the Basin Plan Amendment. The jurisdictions responsible for implementation of this TMDL should be given the opportunity to provide input on other high-priority issues to be considered during this TMDL revision.

> **REQUEST:** Do not limit Ballona Creek Bacteria TMDL revisions to the original reconsideration elements. Instead, consider comments from responsible jurisdictions regarding all topics that are high priority for TMDL implementation and compliance. The list of high priority issues developed in 2006 for the TMDL has evolved.

Major General Comment #2) ***The revised implementation schedule should include at least one TMDL reopener prior to the final compliance dates:***

Reopeners are a critical aspect of TMDL implementation. The revisions to the Ballona Creek Bacteria TMDL will make important modifications, and the Bureau greatly appreciates the time of Regional Board staff to develop and adopt these revisions. However, reopeners are not a "one time deal." The recently adopted Los Angeles River Bacteria TMDL acknowledges the value of multiple reopeners and included two specific reopeners at four- and ten-years after the effective date as well as specific language that a reopener would occur within one year of significant technical studies or policy changes. The science of bacteria regulations are rapidly evolving, and the Bureau requests at least one additional re-opener prior to the final (wet weather) compliance date in 2021. The Regional Board has already limited the scope of the current TMDL revisions to specific elements, and over the next nine years it is certain that additional high priority issues will emerge through completion of implementation projects, special studies, and other data collection efforts. In addition, this future reopener could be used to evaluate and, if needed, revise the proposed calculation method of the geometric mean, as this method uses a rolling

calculation that may result in multiple propagations of peak values at the reference site and compliance sites.

- **REQUEST:** An additional reopener is necessary and should be incorporated into the schedule for the revised Ballona Creek Bacteria TMDL. At least one explicit reopener should occur prior to the final wet weather compliance date of 2021. The recommended date for the explicit reopener is 2018, which (1) represents the point at which responsible jurisdictions will be implementing their final projects for wet weather compliance, (2) corresponds to the date requested by the Bureau for the Santa Monica Bay Beaches TMDL reopener, and (3): provide opportunities for correlating the success of the MS4 Permit Reasonable Assurance Plan to meeting the TMDL.

Major General Comment #3) ***Language should be added to the wasteload allocation sections that allow the Regional Board to discern MS4 discharges from other sources***

The Ballona Creek watershed has a multitude of dischargers including various types of NPDES permits. However, the final WLAs for MS4s are based on allowable numbers of Exceedance Days. In this manner, the Ballona Creek TMDLs make MS4s wholly responsible for attainment of WQOs in the creeks and estuary. That is, if the numbers of exceedances in the creeks or estuary are higher than allowable, then MS4s that discharge to that reach are out of compliance regardless of whether the many other NPDES permittees have addressed their discharges. For example, MS4s could be deemed out of compliance if a major industrial NPDES discharger was continually exceeding their TMDL-required permit limits for *E. coli*. Similarly, for reaches that have multiple municipalities, it is important that jurisdictions can distinguish their discharges from one another. The Los Angeles River Bacteria TMDL addressed this concern with language regarding three "equivalent conditions" that represent WLA attainment for MS4s. This same language should be incorporated into the Ballona Creek TMDLs.

REQUEST: The equivalent conditions language from the Los Angeles River Bacteria TMDL should be incorporated to the BPA for the Ballona Creek Bacteria TMDL. The language below was copied directly from the BPA for the LA River Bacteria TMDL and modified to reflect the Ballona Creek TMDL (e.g., replaced "River" with "reach or estuary", "*E. coli*" with "bacteria", etc.):

> "MS4 dischargers can demonstrate compliance with WLAs by demonstrating that WLAs are met in the reach/estuary or by demonstrating one of the following conditions at outfalls to the reach/estuary:
>
> 1. Flow-weighted concentration of bacteria in MS4 discharges is less than or equal to the single sample WQOs, based on a weighted-average using flow rates from outfalls to the reach or estuary;
> 2. Zero discharge;
> 3. Demonstration of compliance as specified in the MS4 NPDES permit which may include the use of BMPs where the permit's administrative

> record supports that the BMPs are expected to be sufficient to implement the WLA in the TMDL, the use of calculated loading rates such that loading of bacteria to the reach or estuary is less than or equal to a calculated loading rates that would not cause or contribute to exceedances based on a loading capacity representative of conditions at the reach or estuary at the time of compliance or other appropriate method."

It should be noted that this requested change does not necessarily constitute a substantive change to the BPA. During the public comment period for the LA River Bacteria TMDL, the exact language above was added to the BPA and the TMDL was not re-noticed.

REVISIONS THAT ARE SPECIFIC TO THE BALLONA CREEK BACTERIA TMDL

This section describes the Bureau's comments on TMDL revisions that are specific to the Ballona Creek Bacteria TMDL. The following sub-sections include three comments/changes that are critical to the scientific basis of TMDL and critical to the City's ability to successfully implement the Ballona Creek TMDL. Additional comments are provided in Attachment A.

Major Ballona Comment #1) ***The interaction between Exceedance Days and High Flow Suspension Days should be revised to reflect the approach of the LA River Bacteria TMDL.***

During development of the Los Angeles River Bacteria TMDL, a detailed analysis of LAX rainfall data was conducted and an alternative approach was developed for the interaction of the High Flow Suspension (HFS) and Exceedance Days. With the alternative approach, Exceedance Days and HFS days are mutually exclusive (see page 43 and 44 of the Staff Report for the LA River Bacteria TMDL). The approach for the Ballona Creek TMDL should be consistent with the Los Angeles River Bacteria TMDL. It is important that agencies like the City and LA County are not using different HFS versus Exceedance Day approaches in different watersheds.

> **REQUEST:** Please revise the BPA for the Ballona Creek TMDL to reflect the improved approach for the HFS and Exceedance Day interaction, as follows:

1. Please strike entirely the footnote in Table 7.21.2a (page 10) which says: "*** In Reach 2, the greater of the allowable exceedance days under the reference system approach or high flow suspension shall apply."

2. Please replace the tables in the Waste Load Allocations and Load Allocations sections (pages 5 and 6, respectively) with the table below, which was copied directly from the BPA for the Los Angeles River Bacteria TMDL:

Allowable Number of Exceedance Days	Daily Sampling	Weekly Sampling
Dry Weather	5	1
Non-HFS* Waterbodies Wet Weather	15	2
HFS Waterbodies Wet Weather	10 (not including HSF days)	2 (not including HSF days)

*HFS = High Flow Suspension

Major Ballona Comment #2) ***The revised outfall and follow-up investigation monitoring requirements should be removed and combined into a requirement for a Source Investigation Plan***

The Regional Board has added outfall monitoring requirements and revised the follow-up monitoring language in the BPA for the Ballona Creek Bacteria TMDL. Monitoring requirements were not a specific reconsideration element for the TMDL, but the Regional Board staff added outfall monitoring requirements nonetheless. Based on the Bureau's experience with conducting the Coordinated Monitoring Plan (CMP) for the Ballona Creek Bacteria TMDL, we offer an alternative to the monitoring requirements proposed by the Regional Board.

The follow-up monitoring requirements in the original Ballona Creek Bacteria TMDL were based on the beach TMDLs, which were designed to assist with posting of beaches after bacteria exceedances. However, data collected from Ballona Creek are not used to post signs (there is no such notification program for any flowing waterbody in the Los Angeles region). Follow-up monitoring requirements for Ballona Creek should be different than those for the beaches, and useful for the agencies responsible for eliminating bacteria exceedances. The highly prescriptive approach to follow-up monitoring that is currently in the Ballona Creek Bacteria TMDL will require a high-level of resources to repeatedly characterize in-stream concentrations (rather than sources), and the Bureau does not view the data as useful for making management decisions to support implementation. For example, daily monitoring within 24-hours of exceedances neither helps dischargers understand the sources of exceedances nor assists with planning/implementation of control measures. Instead of daily in-stream follow-up monitoring, data regarding the *sources* of upstream bacteria would be much more useful for responsible agencies. The Bureau would appreciate the flexibility to work with the Regional Board, other responsible jurisdictions and stakeholders to develop an outfall and follow-up monitoring program that will be useful for source assessment and TMDL implementation purposes, as well as evaluating attainment of WLAs.

In addition, it should be noted that the requirement to submit an Outfall Monitoring Plan within six months of the effective date of the TMDL revisions may contradict with the upcoming MS4 Permit renewal. In particular, the Watershed Management Plans that are a centerpiece of the draft Permit will not be developed within six months, and thus the proposed Outfall Monitoring

Plan would be developed without coordination with Watershed Management Plans, which is contrary to the spirit of the new permit requirements.

REQUEST: Please replace the outfall monitoring and follow-up monitoring requirements in the BPA with a requirement for the development and implementation of a Source Investigation Plan. The City and other responsible jurisdictions could work jointly to develop a Source Investigation program that would be useful for source assessment, TMDL implementation purposes, and evaluation of WLA attainment. Please note this request is not intended to *reduce* the requirements proposed by the Regional Board; instead it is a request for the Bureau *to have the opportunity to develop a program* that meets the intent of the BPA language: (1) assess outfall loading, (2) characterize in-stream WQO exceedances, and (3) determine whether exceedances are due to MS4 discharges. The following edits to the revised BPA for the Ballona Creek Bacteria TMDL are requested:

1. Strike entirely the 2nd paragraph in the Monitoring section on page 9. (Paragraph starts with "Responsible jurisdictions" and ends with "permit and TMDL objectives").
2. Strike entirely the 4th paragraph in the Monitoring section on page 9. (Paragraph starts with "If an in-stream location" and ends with "bacteria water quality objectives").
3. Insert the following paragraph at the end of the Monitoring section:

"Responsible jurisdictions and agencies shall submit a Source Investigation Plan within one year of the effective date of the TMDL revised by Resolution R12-XXX, and initiate the Source Investigation Plan within six months of receipt of comments from the Regional Board. The Source Investigation Plan shall propose a receiving water and outfall monitoring program to (1) assess the bacteriological water quality of storm drain discharges and their impact on receiving water quality and (2) to characterize the magnitude and duration of exceedances at non-attaining in-stream locations."

Major Ballona Comment #3) ***The Bureau respectfully requests an extension of the dry weather compliance schedule for the Ballona Creek Bacteria TMDL.***

The Ballona Creek Bacteria TMDL may have the most aggressive dry weather schedule of any of the bacteria TMDLs in the Los Angeles region – six years for compliance in a 130 square mile watershed. The Ballona Creek watershed is large and highly urbanized; there are a multitude of sources, responsible jurisdictions, and stakeholders; and there is little or no dilution of dry weather urban runoff in Ballona Creek (unlike the Los Angeles River or Santa Monica Bay). Since original adoption of this TMDL, the Bureau has learned many implementation lessons, particularly from Proposition O projects. In some cases, a *single* BMP project can take six years to complete, *after* funding becomes available. Using realistic project timelines and a dry weather implementation schedule that better reflects them, as was created for the Los Angeles River Bacteria TMDL, is critical to the Bureau.

The Bureau views this reopener as an opportunity to (1) revise the dry weather schedule to better reflect the logistics and engineering challenges faced with the implementation of the Ballona Creek Bacteria TMDL, and (2) to allow for completion of the keystone dry weather projects in the City's Implementation Plan. Justification to extend the dry weather schedule for the Ballona Creek Bacteria TMDL includes the following:

1) **The major dry weather projects in the City's Implementation Plan will take several more years to complete:** even if construction began today, the City's major dry weather projects would not be complete by April 2013. Shown in **Table 1** are costs and timelines for the Low Flow Treatment Systems in Ballona Creek and Sepulveda Channel and a Low Flow Diversion in Del Rey Lagoon. These timelines were developed by the Bureau based on experience with previous projects. It should be noted that the Low Flow Treatment system in Ballona Creek would be one of the largest dry weather treatment systems implemented in the Los Angeles region, and would represent one of the Bureau's premier stormwater projects.

2) **The Bureau has submitted an Implementation Plan to the Regional Board:** the Bureau is eager to receive the RB's comments on our proposed IP. The Bureau understands that the Regional Board rarely adopts or approves implementation plans. However, the dry weather Implementation Plan for the Ballona Creek Bacteria TMDL is unique in that centralized Low Flow Treatment Systems were proposed to treat runoff from Ballona Creek and Sepulveda Channel watersheds. In the comments on the City's Implementation Plan for the Metals TMDL, Regional Board staff raised concerns about the Low Flow Treatment Systems including permitting and attainment of WQOs upstream of their locations. The Bureau cannot move forward with construction of the Low Flow Treatment Systems until we have collaborative discussions with the Regional Board regarding the role and feasibility of Low Flow Treatment Systems for bacteria TMDL compliance.

3) **Additional time is needed to quantify the sources of bacteria in Del Rey Lagoon and its impact on Ballona Estuary:** the wetland system of Del Rey Lagoon is complex. Water from the Ballona Estuary freely flows in and out of the Lagoon during dry weather as the tide gate is open. During low tides, the lagoon is nearly empty. Because of the tidal fluctuations, the lagoon attracts shorebirds and waders such as gulls, herons, and egrets. A study by Dr. John Dorsey from Loyola Marymount University entitled *A Study of Fecal Indicator Bacteria in Del Rey Lagoon* found the Lagoon can act as a source of *Enterococcus* to the Ballona Estuary, and identified birds and sediments as likely sources. Under the CMP, the Bureau has collected a large amount of data from Del Rey Lagoon which has assisted with further characterizing sources to and within the Lagoon. In addition, the Bureau has considered multiple options for addressing the bacteria sources to Del Rey Lagoon including institutional controls and a dry/wet weather diversion (there is only one discrete stormwater outfall to the Lagoon, the proposed project would capture both dry and wet weather flow). Furthermore, Bureau has considered approaches to

address the Lagoon as a natural source to the Estuary, including a loading study. The LFD project (see **Table 1**) and source studies would require close coordination with the Regional Board and other stakeholders (including Department of Fish and Game) and take several years to complete.

Based on the City's good faith effort to implement the Ballona Creek Bacteria TMDL, revisions to the draft Implementation Plan that may need to be done in response to the Regional Board's comments, and the significant timelines associated with completing studies and major dry weather projects, the Bureau respectfully requests a schedule extension.

REQUEST: Please revise the dry weather compliance date to 2021 for the Ballona Creek Bacteria TMDL. In this manner, the dry weather schedule will coincide with the wet weather schedule, which is consistent with the Los Angeles River Bacteria TMDL. A compliance date of 2021 also matches the timelines for the City's major dry weather projects (**Table 1**) and the wet-weather final compliance deadline of the Santa Monica Bay Bacteria TMDL.

Table 1. Timeline and Cost for the Bureau's Major Dry Weather Projects Proposed for Implementation of the Ballona Creek Bacteria TMDL

Dry Weather BMP Timeline or Cost	Ballona Creek LFTS	Sepulveda Channel LFTS	Del Rey Lagoon LFD
Estimated Capital Cost ($)	$11M	$15M	$2M
Estimated Annual O&M Cost ($)	$1M	$1.5M	$0.2M
Estimated Time to Complete Conceptual Design (years)	0.5	2	0.5
Estimated Time to Complete Final Design, Bid, and Award Project(years)	1	1	1.5
Estimated Time for Permitting (years)	1	0.5	1
Estimated Length of Time from Groundbreaking to Start-up (years)	2	2	1
TOTAL Estimated Length of Time from Conceptual Design to Start-up (years)	4.5	5.5	4
Estimated Completion Date if Initiated at the beginning of Fiscal Year 2013	**2018**	**2019**	**2017**

CONCLUSIONS

The Regional Board's effort to revise the Ballona Creek Bacteria TMDL is notable, as it is one of the first bacteria TMDLs in California known to be re-opened and revised. The re-opener process is critical to the City, as TMDL implementation is our most challenging stormwater requirement. The Bureau feels it is critical to address all high priority issues during this TMDL re-opener process, as opposed to limiting the scope to the reconsideration elements identified many years ago.

In developing the comments herein, it was a difficult decision for the Bureau to ask for a dry weather TMDL schedule extension. The Bureau considers itself a good actor, rarely making special requests of this magnitude to the Regional Board. However, in the case of the Ballona Creek Bacteria TMDL, the Bureau has no choice but to ask for additional time. The City is committed to implementing the proposed implementation plan, but given the complexity of the proposed projects we need more time for funding to become available. When considering the request for schedule extensions, please take into account the multitude of actions implemented by the City in the many watersheds across the Los Angeles region to address a wide range of TMDLs. We look forward to continuing our partnership with the Regional Board during ongoing and future TMDL implementation projects.

If you have any questions regarding the Bureau's comments, please contact Ms. Donna Chen at (213) 485-03928, or Mr. Zora Baharians at (213) 485-3918, staff lead on bacteria TMDLs, of the Watershed Protection Division.

Sincerely,

ENRIQUE C. ZALDIVAR, Director
Bureau of Sanitation

ECZ:SK:DC:ZB
WPDCR 8947

List of Attachments:

Attachment A – Bureau of Sanitation's Detailed Comment Matrix

cc: Renee Purdy, California Regional Water Quality Control Board - Los Angeles Region
Deborah J. Smith, Regional Water Quality Control Board - Los Angeles Region
Renee Purdy, Regional Water Quality Control Board - Los Angeles Region
L.B. Nye, Regional Water Quality Control Board - Los Angeles Region
Michael Mullin, Mayor's Office
Traci Minamide, Bureau of Sanitation/EXEC
Varouj S. Abkian, Bureau of Sanitation/EXEC
Adel Hagekhalil, Bureau of Sanitation/EXEC
Shahram Kharaghani, Bureau of Sanitation/WPD
Hubertus Cox, Bureau of Sanitation/WPD
Mas Dojiri, Bureau of Sanitation/EMD
Omar Moghaddam, Bureau of Sanitation/RAD
Hassan Rad, Bureau of Sanitation/RAD

Attachment A – Detailed Comment Matrix for Ballona Creek Bacteria TMDL Revisions

Additional Comment #	Document Reference:	Issue	Comments
1 (This comment is also in the letter)	**BPA**, page 14, last row of table	Establishing that the City's Implementation Plan represents an Integrated Water Resources Management (IWRM) approach	The bacteria TMDLs that are being revised by the Regional Board allowed for slightly extended wet weather compliance schedules if responsible jurisdictions used an IRWM approach for their Implementation Plans. The Bureau went through considerable effort, including stakeholder processes, to ensure its Implementation Plans qualified as IRWM approaches. The Bureau supports the Regional Board's modifications of the wet weather TMDL compliance schedules (year 2021 instead of 2017) to reflect IRWM timelines.
2 (This comment is also in the letter)	**BPA**, page 5, Waste Load Allocations	Revision of Allowable Exceedance Days based on Updated Reference Site Data	When the Ballona Creek Bacteria TMDL was adopted, it was acknowledged that the marine reference site at Leo Carrillo Beach was not representative of freshwater conditions. However, at the time no freshwater reference site data were available. During development of the Los Angeles River Bacteria TMDL, CREST compiled freshwater reference watershed data from the Southern California Coastal Waters Research Program (SCCWRP), and calculated the corresponding number of freshwater Exceedance Days. The Bureau supports the incorporation of freshwater reference data into the Ballona Creek Bacteria TMDL.
3 (This comment is also in the letter)	**Staff Report**, page 25	Geometric mean calculation does not require "filled-in" values	For the Ballona Creek Bacteria TMDL, the current practice as specified in the Coordinated Monitoring Program (CMP) is to "fill in" concentration values on days when samples are not collected in order to calculate a geometric mean on a daily basis. The fill-in, or daily, calculation approach is cumbersome and unnecessary to protect human health. The Bureau supports the Regional Board's decision to use a calculation approach that does not require filled-in values while maintaining the same level of human health protection.

Attachment A – Detailed Comment Matrix for Ballona Creek Bacteria TMDL Revisions

Additional Comment #	Document Reference:	Issue	Comments
4 (This comment is also in the letter)	**Staff Report**, page 28	Allowance for special studies to better represent non-detect samples	It is common to measure bacteria concentrations that are below the method detection limit, particularly in Ballona Creek Estuary. The current practice is to substitute the detection limit for non-detect samples, but for enterococcus the detection limit (10 MPN/100mL) is relatively close to the TMDL target for the marine geometric mean (35 MPN/100mL). As such, some geometric mean exceedances may be an artifact of detection limit substitution as opposed to poor water quality. The Bureau supports the Regional Board's acknowledgement of this issue and allowance to submit special studies to facilitate substitution of alternative values for non-detect samples.
5 (This comment is also in the letter)	**BPA**, page 14, 2nd row of table	Changing compliance with geometric mean targets to reflect wet weather compliance dates	The previous BPA included the concept of a "dry weather geometric mean" which was misrepresentative because the calculation reflected a long-term condition but with many days potentially excluded. The Bureau supports the Regional Board's decision to link geometric mean compliance with the final compliance dates (after both dry and wet weather allocations must be attained).

Attachment A – Detailed Comment Matrix for Ballona Creek Bacteria TMDL Revisions

Additional Comment #	Document Reference:	Issue	Comments
6 (This comment is also in the letter)	**Staff Report**, page 9	Revisions to the Ballona Creek Bacteria TMDL should not be limited to the specific elements identified at the time of original TMDL adoption:	As noted in Staff Report and Public Notice, the Regional Board has focused on specific reconsideration elements, rather than conducting a general reconsideration of the Ballona Creek TMDL and the high priority issues that may affect them. As such, the current reopener is potentially limited in nature and scope. Since the development of the Ballona Creek Bacteria TMDL, the Regional Board staff and responsible jurisdictions have learned many lessons regarding TMDLs and their implementation. These lessons have come during implementation of projects to reduce discharges of bacteria, and from development of subsequent TMDLs including the Los Angeles River Bacteria TMDL. Furthermore, it seems unreasonable to assume the list of high priority reopener issues for the Ballona Creek TMDL is the same now as it was when developed over six years ago in 2006. Finally, there are instances in the TMDL revisions where the Regional Board expanded the scope to include items beyond the original reconsideration elements. For example, monitoring was not a reconsideration element for the Ballona Creek Bacteria TMDL, but the Regional Board has nonetheless added additional monitoring requirements to the Basin Plan Amendment. The jurisdictions responsible for implementation of this TMDL should be given the opportunity to provide input on other high-priority issues to be considered during this TMDL revision. **REQUEST:** Do not limit Ballona Creek Bacteria TMDL revisions to the original reconsideration elements. Instead, consider comments from responsible jurisdictions regarding all topics that are high priority for TMDL implementation and compliance. The list of high priority issues developed in 2006 for the TMDL has evolved.
7 (This comment is also in the letter)	**BPA**, page 14, 1st row of table	The revised implementation schedule should include at least one TMDL reopener prior to the final compliance dates	Reopeners are a critical aspect of TMDL implementation. The revisions to the Ballona Creek Bacteria TMDL will make important modifications, and the Bureau greatly appreciates the time of Regional Board staff to develop and adopt these revisions. However, reopeners are not a "one time deal." The recently adopted Los Angeles River Bacteria TMDL acknowledges the value of multiple reopeners and included two specific reopeners at four- and ten-years after the effective date as well as specific language that a reopener would occur within one year of significant technical studies or policy changes. The science of bacteria regulations are rapidly evolving, and the Bureau requests at least one additional re-opener prior to the final (wet weather) compliance date in 2021. In addition, reopeners provide opportunities for correlating the MS4 Permit Reasonable Assurance Plan to the WLAs of the TMDL. The Regional Board has already limited the scope of the current TMDL revisions to specific elements, and over the next nine years it is certain that additional high priority issues will emerge through completion of implementation projects, special studies, and other data collection efforts. **REQUEST:** An additional reopener is necessary and should be incorporated into the schedule for the revised Ballona Creek Bacteria TMDL. At least one explicit reopener should occur prior to the final wet weather compliance date of 2021. The recommended date for the explicit reopener is 2018, which (1) represents the point at which responsible jurisdictions will be implementing their final projects for wet weather compliance and (2) corresponds to the date requested by the Bureau for the Santa Monica Bay Beaches TMDL reopener.

Attachment A – Detailed Comment Matrix for Ballona Creek Bacteria TMDL Revisions

Additional Comment #	Document Reference:	Issue	Comments
8 (This comment is also in the letter)	**BPA**, page 5, Waste Load Allocations	Language should be added to the wasteload allocation sections that allow the Regional Board to discern MS4 discharges from other sources	The Ballona Creek watershed has a multitude of dischargers including various types of NPDES permits. However, the final WLAs for MS4s are based on allowable numbers of Exceedance Days. In this manner, the Ballona Creek TMDLs make MS4s wholly responsible for attainment of WQOs in the creeks and estuary. That is, if the numbers of exceedances in the creeks or estuary are higher than allowable, then MS4s that discharge to that reach are out of compliance regardless of whether the many other NPDES permittees have addressed their discharges. For example, MS4s could be deemed out of compliance if a major industrial NPDES discharger was continually exceeding their TMDL-required permit limits for *E. coli*. Similarly, for reaches that have multiple municipalities, it is important that jurisdictions can distinguish their discharges from one another. The Los Angeles River Bacteria TMDL addressed this concern with language regarding three "equivalent conditions" that represent WLA attainment for MS4s. This same language should be incorporated into the Ballona Creek TMDLs. **REQUEST:** The equivalent conditions language from the Los Angeles River Bacteria TMDL should be incorporated to the BPA for the Ballona Creek Bacteria TMDL. The language below was copied directly from the BPA for the LA River Bacteria TMDL and modified to reflect the Ballona Creek TMDL (e.g., replaced "River" with "reach or estuary", "*E. coli*" with "bacteria", etc.): "MS4 dischargers can demonstrate compliance with WLAs by demonstrating that WLAs are met in the reach/estuary or by demonstrating one of the following conditions at outfalls to the reach/estuary: 1. Flow-weighted concentration of bacteria in MS4 discharges is less than or equal to the single sample WQOs, based on a weighted-average using flow rates from outfalls to the reach or estuary; 2. Zero discharge; 3. Demonstration of compliance as specified in the MS4 NPDES permit which may include the use of BMPs where the permit's administrative record supports that the BMPs are expected to be sufficient to implement the WLA in the TMDL, the use of calculated loading rates such that loading of bacteria to the reach or estuary is less than or equal to a calculated loading rates that would not cause or contribute to exceedances based on a loading capacity representative of conditions at the reach or estuary at the time of compliance or other appropriate method." It should be noted that this requested change does not necessarily constitute a substantive change to the BPA. During the public comment period for the LA River Bacteria TMDL, the exact language above was added to the BPA and the TMDL was not re-noticed.

Attachment A – Detailed Comment Matrix for Ballona Creek Bacteria TMDL Revisions

<table>
<tr><th>Additional Comment #</th><th>Document Reference:</th><th>Issue</th><th>Comments</th></tr>
<tr><td>9

(This comment is also in the letter)</td><td>BPA, page 5, Waste Load Allocations</td><td>The interaction between Exceedance Days and High Flow Suspension Days should be revised to reflect the approach of the LA River Bacteria TMDL</td><td>During development of the Los Angeles River Bacteria TMDL, a detailed analysis of LAX rainfall data was conducted and an alternative approach was developed for the interaction of the High Flow Suspension (HFS) and Exceedance Days. With the alternative approach, Exceedance Days and HFS days are mutually exclusive (see page 43 and 44 of the Staff Report for the LA River Bacteria TMDL). The approach for the Ballona Creek TMDL should be consistent with the Los Angeles River Bacteria TMDL. It is important that agencies like the City and LA County are not using different HFS versus Exceedance Day approaches in different watersheds.

REQUEST: Please revise the BPA for the Ballona Creek TMDL to reflect the improved approach for the HFS and Exceedance Day interaction, as follows:

1. Please strike entirely the footnote in Table 7.21.2a (page 10) which says: "*** In Reach 2, the greater of the allowable exceedance days under the reference system approach or high flow suspension shall apply."

2. Please replace the tables in the Waste Load Allocations and Load Allocations sections (pages 5 and 6, respectively) with the table below, which was copied directly from the BPA for the Los Angeles River Bacteria TMDL:

<table>
<tr><th>Allowable Number of Exceedance Days</th><th>Daily Sampling</th><th>Weekly Sampling</th></tr>
<tr><td>Dry Weather</td><td>5</td><td>1</td></tr>
<tr><td>Non-HFS* Waterbodies Wet Weather</td><td>15</td><td>2</td></tr>
<tr><td>HFS Waterbodies Wet Weather</td><td>10 (not including HSF days)</td><td>2 (not including HSF days)</td></tr>
</table>
*HFS = High Flow Suspension</td></tr>
</table>

Attachment A – Detailed Comment Matrix for Ballona Creek Bacteria TMDL Revisions

Additional Comment #	Document Reference:	Issue	Comments
10 (This comment is also in the letter)	**BPA**, page 9, 1st row of table	The revised outfall and follow-up investigation monitoring requirements should be removed and combined into a flexible requirement for a Source Investigation Plan	The Regional Board has added outfall monitoring requirements and revised the follow-up monitoring language in the BPA for the Ballona Creek Bacteria TMDL. Monitoring requirements were <u>not</u> a specific reconsideration element for the TMDL, but the Regional Board staff added outfall monitoring requirements nonetheless. Based on the Bureau's experience with conducting the Coordinated Monitoring Plan (CMP) for the Ballona Creek Bacteria TMDL, we offer an alternative to the monitoring requirements proposed by the Regional Board. The follow-up monitoring requirements in the original Ballona Creek Bacteria TMDL were based on the beach TMDLs, which were designed to assist with posting of beaches after bacteria exceedances. However, data collected from Ballona Creek are not used to post signs (there is no such notification program for any flowing waterbody in the Los Angeles region). Follow-up monitoring requirements for Ballona Creek should be different than those for the beaches, and useful for the agencies responsible for eliminating bacteria exceedances. The highly prescriptive approach to follow-up monitoring that is currently in the Ballona Creek Bacteria TMDL will require a high-level of resources to repeatedly characterize in-stream concentrations (rather than sources), and the Bureau does not view the data as useful for making management decisions to support implementation. For example, daily monitoring within 24-hours of exceedances neither helps dischargers understand the sources of exceedances nor assists with planning/implementation of control measures. Instead of daily in-stream follow-up monitoring, data regarding the *sources* of upstream bacteria would be much more useful for responsible agencies. The Bureau would appreciate the flexibility to work with the Regional Board, other responsible jurisdictions and stakeholders to develop an outfall and follow-up monitoring program that will be useful for source assessment and TMDL implementation purposes, as well as evaluating attainment of WLAs. In addition, it should be noted that the requirement to submit an Outfall Monitoring Plan within six months of the effective date of the TMDL revisions may contradict with the upcoming MS4 Permit renewal. In particular, the Watershed Management Plans that are a centerpiece of the draft Permit will not be developed within six months, and thus the proposed Outfall Monitoring Plan would be developed without coordination with Watershed Management Plans, which is contrary to the spirit of the new permit requirements. **REQUEST:** Please replace the outfall monitoring and follow-up monitoring requirements in the BPA with a requirement for the development and implementation of a Source Investigation Plan. The City and other responsible jurisdictions could work jointly to develop a Source Investigation program that would be useful for source assessment, TMDL implementation purposes, and evaluation of WLA attainment. Please note this request is <u>not</u> intended to *reduce* the requirements proposed by the Regional Board; instead it is a request for the Bureau *to have the opportunity to develop a program* that meets the intent of the BPA language: (1) assess outfall loading, (2) characterize in-stream WQO exceedances, and (3) determine whether exceedances are due to MS4 discharges. The following edits to the revised BPA for the Ballona Creek Bacteria TMDL are requested: 1. Strike entirely the 2nd paragraph in the Monitoring section on page 9. (paragraph starts with "Responsible jurisdictions" and ends with "permit and TMDL objectives"). 2. Strike entirely the 4th paragraph in the Monitoring section on page 9. (paragraph starts with "If an in-stream location" and ends with "bacteria water quality objectives"). 3. Insert the following paragraph at the end of the Monitoring section: "Responsible jurisdictions and agencies shall submit a Source Investigation Plan within one year of the effective date of the TMDL revised by Resolution R12-XXX, and initiate the Source Investigation Plan within six months of receipt of comments from the Regional Board. The Source Investigation Plan shall propose a receiving water and outfall monitoring program to (1) assess the bacteriological water quality of storm drain discharges and their impact on receiving water quality and (2) to characterize the magnitude and duration of exceedances at non-attaining in-stream locations."

Attachment A – Detailed Comment Matrix for Ballona Creek Bacteria TMDL Revisions

Additional Comment #	Document Reference:	Issue	Comments
11 (This comment is also in the letter)	**BPA**, page 14, 2nd row of table	The Bureau respectfully requests an extension of the dry weather compliance schedule for the Ballona Creek Bacteria TMDL.	The Ballona Creek Bacteria TMDL may have the most aggressive dry weather schedule of any of the bacteria TMDLs in the Los Angeles region – six years for compliance in a 130 square mile watershed. The Ballona Creek watershed is large and highly urbanized; there are a multitude of sources, responsible jurisdictions, and stakeholders; and there is little or no dilution of dry weather urban runoff in Ballona Creek (unlike the Los Angeles River or Santa Monica Bay). Since original adoption of this TMDL, the Bureau has learned many implementation lessons, particularly from Proposition O projects. In some cases, a *single* BMP project can take six years to complete, *after* funding becomes available. Using realistic project timelines and a dry weather implementation schedule that better reflects them, as was created for the Los Angeles River Bacteria TMDL, is critical to the Bureau. , The Bureau views this reopener as an opportunity to (1) revise the dry weather schedule to better reflect the logistics and engineering challenges faced with the implementation of the Ballona Creek Bacteria TMDL, and (2) to allow for completion of the keystone dry weather projects in the City's Implementation Plan. Justification to extend the dry weather schedule for the Ballona Creek Bacteria TMDL includes the following: 1) **The major dry weather projects in the City's Implementation Plan will take several more years to complete:** even if construction began today, the City's major dry weather projects would not be complete by April 2013. Shown in **Table 1** of the letter are costs and timelines for the Low Flow Treatment Systems in Ballona Creek and Sepulveda Channel and a Low Flow Diversion in Del Rey Lagoon. These timelines were developed by the Bureau based on experience with previous projects. It should be noted that the Low Flow Treatment system in Ballona Creek would be one of the largest dry weather treatment systems implemented in the Los Angeles region, and would represent one of the Bureau's premier stormwater projects. **2) The Bureau has submitted an Implementation Plan to the Regional Board:** the Bureau is eager to receive the RB's comments on our proposed IP. The Bureau understands that the Regional Board rarely adopts or approves implementation plans. However, the dry weather Implementation Plan for the Ballona Creek Bacteria TMDL is unique in that centralized Low Flow Treatment Systems were proposed to treat runoff from Ballona Creek and Sepulveda Channel watersheds. In the comments on the City's Implementation Plan for the Metals TMDL, Regional Board staff raised concerns about the Low Flow Treatment Systems including permitting and attainment of WQOs upstream of their locations. The Bureau cannot move forward with construction of the Low Flow Treatment Systems until we have collaborative discussions with the Regional Board regarding the role and feasibility of Low Flow Treatment Systems for bacteria TMDL compliance. 3) **Additional time is needed to quantify the sources of bacteria in Del Rey Lagoon and its impact on Ballona Estuary:** the wetland system of Del Rey Lagoon is complex. Water from the Ballona Estuary freely flows in and out of the Lagoon during dry weather as the tide gate is open. During low tides, the lagoon is nearly empty. Because of the tidal fluctuations, the lagoon attracts shorebirds and waders such as gulls, herons, and egrets. A study by Dr. John Dorsey from Loyola Marymount University entitled *A Study of Fecal Indicator Bacteria in Del Rey Lagoon* found the Lagoon can act as a source of *Enterococcus* to the Ballona Estuary, and identified birds and sediments as likely sources. Under the CMP, the Bureau has collected a large amount of data from Del Rey Lagoon which has assisted with further characterizing sources to and within the Lagoon. In addition, the Bureau has considered multiple options for addressing the bacteria sources to Del Rey Lagoon including institutional controls and a dry/wet weather diversion (there is only one discrete stormwater outfall to the Lagoon, the proposed project would capture both dry and wet weather flow). Furthermore, Bureau has considered approaches to address the Lagoon as a natural source to the Estuary, including a loading study. The LFD project (see **Table 1** of the letter) and source studies would require close coordination with the Regional Board and other stakeholders (including Department of Fish and Game) and take several years to complete. Based on the City's good faith effort to implement the Ballona Creek Bacteria TMDL, revisions to the Plan that may need to be done in response to the Regional Board's comments, and the significant timelines associated with completing studies and major dry weather projects, the Bureau respectfully requests a schedule extension. **REQUEST:** Please revise the dry weather compliance date to 2021 for the Ballona Creek Bacteria TMDL. In this manner, the dry weather schedule will coincide with the wet weather schedule, which is consistent with the Los Angeles River Bacteria TMDL. A compliance date of 2021 also matches the timelines for the City's major dry weather projects (**Table 1** of the letter).

Attachment A – Detailed Comment Matrix for Ballona Creek Bacteria TMDL Revisions

Additional Comment #	Document Reference:	Issue	Comments
12 (This comment is not in the letter)	**Staff Report,** page 10. Also Appendix C. **BPA,** page 5, Wasteload Allocations	Using "dry" instead of "winter dry" and "summer dry"	The Bureau would like to express its support for categorizing the number of freshwater exceedances based on "wet" and "dry" days, instead of further separating dry weather into "summer dry" and "winter dry". The new dry weather categorization approach better reflects the operations of low flow diversions (LFDs) in the area, which are now operated year-around and not seasonally.
13 (This comment is not in the letter)	**BPA,** page 10, Table 7.21.2a	BPA refers to "seasonal periods" for geomean attainment	The BPA states the Final Allowable Exceedance Days is zero (0) during the Winter Season, Early Summer Season, Mid-Summer Season, and Later Summer Season. Please clarify what is meant by these "Seasons."