

Appendix V

Responses to Comments

Part III

Responses to written comments received on or before January 25, 2010 for Revised Total Maximum Daily Load for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek), dated November 25, 2009.

Responses to comments (Parts I and II) received on Total Maximum Daily Loads for Indicator Bacteria, Project I – Beaches and Creeks in the San Diego Region, adopted December 17, 2007, are available in Appendices S and U to the draft Technical Report.

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1 Introduction

The documents for the *Revised Total Maximum Daily Loads (TMDLs) for Indicator Bacteria Project I—Twenty Beaches and Creeks in the San Diego Region (including Tecolote Creek)* (hereinafter *Revised Bacteria TMDLs Project I*) were made available to the public for formal review and comment beginning November 25, 2009. This document provides written responses to written comments received on or before January 25, 2010.

The comments letters received were not reproduced in this document. Individual comments were excerpted from the letters. The comments are numbered sequentially in this report. Comments are separated in this document by section. Each section is for each individual commenter. Individual commenters are identified in the “List of Persons Submitting Comments” below.

2 Key Issues

Based upon a review of the written comments submitted on or before January 25, 2010, several key issues raised by the commenters were identified. The key issues and general responses are provided below.

2.1 *Removal of Delisted Beaches from TMDLs*

Several commenters are opposed to including certain beaches in these TMDLs that were recently delisted from the 2008 303(d) List.

Response: Several beaches listed on the 2002 Clean Water Act Section 303(d) List of Water Quality Limited Segments (303(d) List) have been delisted on the 2008 303(d) List. Removal of a beach segment from the 303(d) List, however, does not ensure that it will not be placed on the list again in the future. All the specific beaches addressed by these TMDLs were listed at one time on the 2002 303(d) List, or earlier, indicating impairment by bacteria has occurred in the past, and the threat still remains in the present and future.

While some specific beach segments have been delisted from the 2008 303(d) List, the majority of the beach segments along the Pacific Ocean shorelines listed on the 2002 303(d) List and addressed by these TMDLs remain listed on the 2008 303(d) List. Because these indicator bacteria TMDLs are applicable to the entire Pacific Ocean shoreline of a watershed, all the beaches that fall within the Pacific Ocean shoreline are included in the TMDLs. Therefore, if a delisted beach is listed again in the future, there will be applicable TMDLs already in place to address the impairment. Likewise, if a beach along one of those Pacific Ocean shorelines that was not listed in the past is listed in a future iteration of the 303(d) List, there will be applicable TMDLs already in place to address the impairments. This is significant since the development of TMDLs is very resource and time intensive and TMDLs already in place can be implemented immediately.

Furthermore, the San Diego Water Board has expended a significant amount of resources to develop these indicator bacteria TMDLs. Removing specific beach segments from these TMDLs at this time would not be a good use of those spent resources, especially if those beaches were to be re-listed in the future. By having these TMDLs in place, the San Diego Water Board is maximizing its limited resources and ensuring that current and future potential bacteria impairments will be addressed.

Finally, Clean Water Act Section 303(d)(1) requires each state to identify waters within its boundaries not able to meet water quality standards and establish a priority ranking for such waters. In addition, section 303(d)(1) requires the establishment of TMDLs for those waters. For waters not identified and prioritized as required by section 303(d)(1), section 303(d)(3) requires the estimation of TMDLs as well. Thus, section 303(d) requires the establishment of TMDLs with seasonal variations and margin of safety for all waterbodies, regardless of whether or not they are on the Clean Water Act Section 303(d) List of Water Quality Limited Segments (303(d) List). The 303(d) List is just a list of the waterbodies with the highest priority for the development of TMDLs and TMDL implementation plans.

The adoption of bacteria TMDLs for all 20 waterbodies will ensure that the San Diego Water Board has a plan in place to address the existing and the future potential bacteria impairments, as well as fulfill the requirements of Clean Water Act section 303(d)(1) and (3).

2.2 Definition of Wet Days

Several commenters asserted that the allowable exceedance frequency for the wet weather TMDLs should be based on wet weather days defined as days with 0.1-inches of rainfall and the following 72 hours, instead of 0.2-inches and the following 72 hours, as defined in these TMDLs.

Response: A wet weather day was defined as days with 0.2 inches of rainfall and the following 72 hours in the original Bacteria TMDLs Project I Basin Plan amendment adopted on December 12, 2007 and has not been changed. There were no comments submitted at the time that opposed this definition of a wet weather day, thus no change in the definition was made.

This comment was raised during the January 7, 2010 SAG meeting that the exceedance frequencies at Leo Carrillo Beach were calculated based on wet weather days defined as rainfall events of at least “0.1 inch and the following 72 hours.” The Leo Carrillo Beach reference study identified a reference system that was used to define an allowable exceedance frequency specific to the Los Angeles Region. For these bacteria TMDLs, the San Diego Water Board decided to use the 22 percent wet weather exceedance frequency as an *initial* allowable exceedance frequency, with the expectation that a region specific or multiple watershed specific allowable exceedance frequencies would be developed as additional data were collected in reference systems identified for the San Diego Region. There were several comments submitted for *Bacteria TMDLs Project I* that supported developing a region specific allowable exceedance frequency.

Presumably, because these TMDLs define a wet weather day based on 0.2 inches rather than 0.1 inches of rainfall, there would be fewer wet weather days and potentially a higher exceedance frequency. Another option would be to set the wet weather allowable exceedance frequency at 0 percent until a region specific allowable exceedance frequency is developed. This, however, was the initial (and current) reason that the Reference System Approach Basin Plan amendment was needed and developed.

Because of the uncertainty associated with using a reference system that is not specific to the San Diego Region, using a somewhat conservative wet weather allowable exceedance frequency (i.e., 22 percent) is warranted until a region specific wet weather allowable exceedance frequency is developed. The San Diego Water Board supports developing and establishing a region specific allowable exceedance frequency during wet weather conditions based on data collected from reference systems in the San Diego Region.

Until a region specific wet weather exceedance frequency is developed, the 22 percent wet weather exceedance frequency is an appropriate *initial* allowable exceedance frequency for these TMDLs.

2.3 Dry Weather Allowable Exceedance Frequency

Several commenters asserted that the dry weather TMDLs should include an allowable exceedance frequency greater than 0 percent.

Response: This comment was raised during the January 7, 2010 SAG meeting about the application of the Leo Carillo Beach reference study used by the Los Angeles Water Board. The Leo Carillo Beach reference study identified a reference system that was used to define an allowable exceedance frequency specifically for the Los Angeles Region. In the Los Angeles Region, there is an allowable exceedance frequency of the single sample maximum for wet weather (22 percent), winter dry weather (3 percent), and summer dry weather (0 percent).

For these bacteria TMDLs, the San Diego Water Board decided to use the 0 percent dry weather exceedance frequency as an *initial* allowable exceedance frequency for the dry weather TMDLs, applicable for the entire year. The 0 percent dry weather allowable exceedance frequency applies to all dry weather days for both the single sample maximum and 30-day geometric mean WQOs. Because of the uncertainty associated with using a reference system that is not specific to the San Diego Region, using the most conservative dry weather allowable exceedance frequency (i.e., 0 percent) is warranted until a region specific dry weather allowable exceedance frequency is developed.

The San Diego Water Board supports developing and establishing an allowable exceedance frequency during dry weather conditions based on data collected from reference systems in the San Diego Region. The dry weather allowable frequency that is developed may include a seasonal component (e.g., summer vs. winter dry weather conditions) if the data support it.

Until a region specific dry allowable exceedance frequency is developed, a 0% allowable exceedance frequency for dry weather conditions is appropriate for the dry weather TMDLs.

2.4 Dry Weather Surface Runoff Assumption

Several commenters disagreed with the assumption that surface runoff during dry weather conditions is generated only by anthropogenic activities.

Response: The assumption is that surface runoff during dry weather is generated only by anthropogenic activities and discharged from specific land use categories to receiving waters. Several of the comments reference studies by the Southern California Coastal Water Research Project (SCCWRP) which indicate that there are reference systems that have natural flow during dry weather. Comments also assert groundwater inputs and natural springs can cause dry weather flows.

The dry weather TMDL calculations and allocations assume that all the surface runoff is associated with land uses associated with the Municipal MS4s. Land uses associated with Caltrans, Agriculture, and Open Space are assumed to have no flow, thus the entire TMDL is allocated to the Municipal MS4s as a WLA, and the other sources are not allocated any portion of the TMDL (i.e., WLA = 0 or LA = 0). If there is a load that is generated by a source that results in a WLA or LA of greater than 0, then the Municipal MS4 WLA will have to be reduced by the same amount. At this time there are insufficient data available that support

assigning a WLA or LA greater than 0 to the Caltrans, Agriculture, or Open Space land use categories.

Groundwater inputs and natural springs are not surface runoff and may not originate from anthropogenic land uses. At this time, there is insufficient data about bacteria loads associated with natural sources such as groundwater inputs and natural springs and their contribution to dry weather flows in stream systems. Historically, stream systems in the Region were ephemeral or intermittent. With increased development, flows in some streams have become less ephemeral or intermittent and more perennial, which is likely due to the anthropogenic influences on the landscape of most watersheds in the San Diego Region, including increased groundwater levels.

Additional studies may be performed to characterize the loads associated with other land use categories or natural sources that contribute to dry weather flows in the stream systems in the region which may affect the allocation of the dry weather TMDLs. Additional studies may also be performed to identify an allowable exceedance frequency for the dry weather TMDLs which may be applied with the reference system approach or natural sources exclusion approach.

In any case, until more data regarding other land use categories and natural sources that contribute to dry weather flows are collected, the assumption that all dry weather *surface runoff* flows originate from the land uses associated with Municipal MS4s is appropriate.

2.5 Water Code Section 13241

Several commenters assert that this TMDL Basin Plan amendment should be subject to the requirements of Water Code section 13241, especially the economic considerations.

Response: A similar concern was raised during the public comment period of Bacteria TMDLs Project I before it was adopted in December 2007 (see comment 33 in Appendix S to the draft Technical Report). Water Code section 13241 only applies when new WQOs are established. TMDLs interpret *existing* WQOs that are already in the Basin Plan. The TMDLs do not establish new WQOs. For this reason, the requirement to consider the Water Code section 13241 factors when establishing TMDLs (these and any others) does not apply.

2.6 TMDL Re-opener

Several commenters assert that there should be a commitment and a specific timeline for re-opening the TMDLs for revisions.

Response: A similar concern was raised during the public comment period of the original Bacteria TMDLs Project I before it was adopted in December 2007 (see comment 213 in Appendix S to the draft Technical Report). The Basin Plan amendment, in fact, already commits to future revisions of the TMDL, as necessary. See page A49 of the draft Basin Plan amendment (and page 114 of the draft Technical Report). This section outlines the elements necessary for the San Diego Water Board to amend the Basin Plan.

In addition, the last item in the TMDL Implementation Milestones is for amendments to “the Basin Plan and/or provision of the TMDL based on evidence provided by the dischargers and/or other entities” on an as needed basis after the effective date of these TMDLs. Please see item 21

in the TMDL Implementation Milestones table on page A70 of the draft Basin Plan amendment (and Table 11-9 on page 139 of the draft Technical Report).

Revisions to the provisions of these TMDLs may take place anytime after the effective date. If there are compelling data and evidence that warrant a revision to the provisions of these TMDLs, the San Diego Water Board will make every effort to amend the TMDLs in the Basin Plan accordingly. Therefore, a specific timeline is not necessary.

2.7 Other Key Issues

In addition to the key issues that were identified and addressed above, there were a few additional common themes found throughout the comments that are addressed below.

2.7.1 Assessment of Compliance

Several commenters were opposed to including the 30-day geometric mean REC-1 WQOs as part of the compliance assessment for the wet weather TMDLs, and questioned whether it was appropriate to include it as part of the compliance assessment.

Response: The goal of any TMDL is to restore the beneficial uses of an impaired waterbody. This means that the water quality objectives that support those beneficial uses must be met in the receiving waters. If the water quality objectives are not being met in the receiving waters, the impairment has not been corrected.

The water quality objectives in the Ocean Plan and Basin Plan include a single sample maximum and a geometric mean and do not differentiate between dry and wet weather. Both objectives are applicable to these TMDLs throughout the entire year.

At this time for these TMDLs, the San Diego Water Board has chosen to use a 22 percent allowable exceedances frequency of the single sample maximum water quality objectives specific to wet weather. This is the only allowable exceedance frequency greater than 0 percent authorized under these TMDLs. We have not chosen an allowable exceedance frequency of the geometric mean that is greater than 0 percent for wet weather or dry weather TMDLs. We have also not provided an allowable exceedance frequency of the single sample maximum WQOs for dry weather TMDLs greater than 0 percent.

The Phase I MS4s dischargers must meet each of the four bacteria receiving water limits shown below in order to be considered “in compliance” with the TMDL. If controllable sources other than the Phase I MS4s are identified as causing the exceedances, and the Phase I MS4s have demonstrated they are not causing or contributing to the exceedances, the Phase I MS4s will not be considered out of compliance. The receiving water limits are comprised of (1) the two bacteria water quality objectives (from Ocean Plan and Basin Plan) that are applicable, namely, the single sample maximum and 30-day geometric mean; and, (2) the allowable exceedance frequencies. These receiving water limits as they apply during wet weather and dry weather are summarized below

Compliance with Wet Weather TMDLs in Receiving Waters

- a. Single Sample Maximum REC-1 WQOs and a 22% allowable exceedance frequency applicable to all wet weather days between October 1 and April 30.
- b. 30-day Geometric Mean REC-1 WQOs and a 0% allowable exceedance frequency applicable to wet and dry weather days between October 1 and April 30.

Compliance with Dry Weather TMDLs in Receiving Waters

- a. Single Sample Maximum REC-1 WQOs and a 0% allowable exceedance frequency applicable to all dry weather days during the year.
- b. 30-day Geometric Mean REC-1 WQOs and a 0% allowable exceedance frequency applicable to all dry weather days during the year.

At this time, compliance will be measured in the receiving waters (rather than in the effluent) and will be assessed on a watershed basis. Compliance with the receiving water limits is required no later than 10 years from effective date of these TMDLs if the Phase I MS4s and Caltrans develop and implement Bacteria Load Reduction Plans (BLRPs). The wet weather TMDLs may be extended to no later than 20 years if the Phase I MS4s and Caltrans develop and implement CLRPs.

In addition, the San Diego Water Board supports developing and establishing region specific or watershed specific allowable exceedance frequencies of the single sample maximum or geometric mean based on data collected from reference systems in the San Diego Region. The allowable exceedance frequencies developed may include a seasonal component (e.g., winter vs. summer seasons) if support by the data.

2.7.2 Responsibilities of Phase I MS4s and Other Dischargers

There were several comments that were related to defining the responsibilities of the Phase I MS4s compared to other dischargers.

Response: The following table summarizes the responsibilities of the San Diego Water Board, Phase I MS4s, and other dischargers.

TMDL Implementation Plan Summary

| Discharger | Wet Weather | | Dry Weather | | BLRP/CLRP Requirement? | Monitoring Required? | San Diego Water Board Actions |
|-------------------------------|----------------------------|--------------------------------------|----------------------|------------------------------|------------------------|--------------------------------------|---|
| | WLA/LA | Load Reduction Requirement? | WLA/LA | Load Reduction Requirement? | | | |
| Point | | | | | | | |
| Phase I MS4s | WLA Assigned | YES | WLA Assigned | YES | YES | YES (as specified in NPDES req's) | <ul style="list-style-type: none"> Revise and re-issue NPDES permit Issue investigative orders for BLRPs as needed Issue enforcement orders as needed |
| Caltrans | WLA Assigned | NO (Cannot exceed existing load) | WLA = 0 | NO (Discharge Prohibited) | YES | YES (as specified in NPDES req's) | <ul style="list-style-type: none"> Request State Water Board to revise and re-issue NPDES permit Issue investigative orders for BLRPs as needed Issue enforcement orders as needed |
| Phase II MS4s | WLA = 0 ¹ | NO (Discharge Prohibited) | WLA = 0 ¹ | NO (Discharge Prohibited) | NO ² | NO ² | <ul style="list-style-type: none"> If identified as a significant source, enroll under State General Permit or issue individual NPDES Permit Issue investigative orders for BLRPs as needed Issue enforcement orders as needed |
| POTWs | WLA = 0 | NO (Discharge Prohibited) | WLA = 0 | NO (Discharge Prohibited) | NO | NO | <ul style="list-style-type: none"> If identified as significant source, issue enforcement orders as needed to cease discharge |
| CAFOs | WLA = 0 | NO (Discharge Prohibited) | WLA = 0 | NO (Discharge Prohibited) | NO | NO | <ul style="list-style-type: none"> If identified as significant source, issue enforcement orders as needed to cease discharge |
| Other Point Sources | WLA = 0 | NO (Discharge Prohibited) | WLA = 0 | NO (Discharge Prohibited) | NO | NO | <ul style="list-style-type: none"> If identified as significant source, issue enforcement orders as needed to cease discharge |
| Nonpoint | | | | | | | |
| Agriculture | LA Assigned ^{3,4} | YES ³ and NO ⁴ | WLA = 0 | NO (Discharge Prohibited) | NO ² | YES ^{3,4} | <ul style="list-style-type: none"> If identified as significant source, revise conditional waivers, or issue WDRs and/or enforcement orders as needed |
| Other Nonpoint Sources | LA = 0 | NO (Discharge Prohibited) | WLA = 0 | NO (Discharge Prohibited) | NO ² | NO ² | <ul style="list-style-type: none"> If identified as significant source, revise conditional waivers, or issue WDRs and/or enforcement orders as needed to cease discharge |

1. Because there are no Phase II MS4s enrolled under the State General Permit, discharges from Phase II MS4s are not permitted (i.e., WLA = 0). When a Phase II MS4 is enrolled under the State General Permit or issued an individual NPDES permit, the discharge will be considered part of the Municipal MS4 WLA.
2. If the discharger is identified as a significant source, the San Diego Water Board may require the discharger to prepare and submit a BLRP, which will also have a required monitoring component.
3. Discharges from agriculture land uses in 4 watersheds were identified as significant sources of bacteria and assigned LAs and load reduction requirements for wet weather. Irrigated agriculture is regulated with conditional waivers. The conditional waiver for irrigated agriculture has a monitoring requirement.
4. Discharges from agriculture land uses in 8 watersheds were assigned LAs equal to the modeled existing loads for wet weather. There is no load reduction requirement, but they cannot increase their existing loads. Irrigated agriculture is regulated with conditional waivers. The conditional waiver for irrigated agriculture has a monitoring requirement.

3 List of Persons Submitting Comments

The following persons submitted written comments on the Revised Draft Final Technical Report for the Revised Total Maximum Daily Loads (TMDLs) for Indicator Bacteria, Project I—Twenty Beaches and Creeks (including Tecolote Creek) in the San Diego Region, dated November 25, 2009.

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4 Comments and Responses

Comments and responses are grouped according to individual commenters in the following subsections.

4.1 California Department of Transportation

Comment 1

Caltrans would like to request that the Regional Water Quality Control Board remove the requirement to submit a BLRP or CLRP since Caltrans is not a considerable source of indicator bacteria to the listed water bodies. We will continue our efforts to eliminate indicator bacteria sources discharging to the listed receiving water bodies and report these activities with other actions and planned activities to comply with the TMDL in the Stormwater Management Program Annual Report, as done for other TMDLs throughout the state.

Response: The BLRP or CLRP requirement for Caltrans was also included in Bacteria TMDLs Project I adopted in December 2007. Please see pages 185-192 in the underline/strikeout version of the draft Technical Report. The BLRP or CLRP requirement for Caltrans is consistent with the Basin Plan amendment adopted on December 12, 2007, and will remain in the revised Basin Plan amendment.

4.2 City of Carlsbad

No comments requiring response.

4.3 City of Dana Point

Comment 2

Page 81 of the Technical Report states, “Available data show that exceedances of REC-1 WQOs in local reference systems during dry weather conditions are uncommon (see section 4.2).”

This statement is not accurate. San Diego Board staff members are aware of the study conducted by the independent Southern Coastal California Water Research Project (SCCWRP) published and titled, *Fecal Indicator Bacteria (FIB) levels during dry weather from southern California reference streams. 2008*, LL Tiefenthaler, ED Stein, GS Lyon. Technical Report 542., which states, “A total of 18.2% of the indicator bacteria samples (for all three indicators) from the natural sites exceeded daily (single sample) water quality standards. Approximately 1.5%, 14%, and 3% of *E. coli*, enterococci, and total coliforms, respectively, exceeded single sample water quality criteria.”

Taking this information into account, the statement that WQO exceedances during dry weather are “uncommon” is thus incorrect and a reference system approach is thus necessary for the dry weather TMDLs in issue.

A calculated exceedance frequency for dry weather TMDLs based on the reference watershed data should thus be incorporated into the TMDL at this time, prior to adoption of the proposed TMDL. We are aware of the San Diego Board’s and EPA’s desire to keep this TMDL moving forward, with no substantive changes thereto, but do not believe that this significant data can be ignored for the sake of expediency. As such, at a minimum, we propose that the following or similar language be added to the TMDL, and that other appropriate changes be made to the TMDL consistent with the objective of the suggested language below:

“More recently published data, Southern Coastal California Water Research Project’s (SCCWRP) Study published and titled, [Fecal Indicator Bacteria \(FIB\) levels during dry weather from southern California reference streams](#), 2008. LL Tiefenthaler, ED Stein, GS Lyon, shows that exceedances of REC-1 WQOs in local reference systems during dry weather conditions is not uncommon. A reference system approach for dry weather TMDLs, as in the wet weather TMDLs, resulting in an allowable exceedance frequency, is thus warranted and will be developed by San Diego Board staff prior to final adoption of this TMDL, and once developed will be utilized as the basis for the waste load allocation for dry weather runoff.”

Response: We are aware of the study that the commenter referenced. The study is specific to streams during dry weather and would not be applicable to beaches. The study was limited to one year of monitoring. In addition to the statement cited by the commenter, the study also stated that “*Annual mean concentrations (both single sample and 30-day geometric mean) were below established water quality criteria for all three indicators.*” This statement appears to support that the statement made in the draft Technical Report.

The San Diego Water Board supports developing and establishing an allowable exceedance frequency during dry weather conditions based on data collected from reference systems in the San Diego Region. The study conducted by SCCWRP that is referenced by the commenter is a

good beginning toward establishing an allowable exceedance frequency for dry weather conditions, but the results are far from conclusive. Further studies and data collection are required before an allowable exceedance frequency for dry weather can be established for the San Diego Region.

Until then, a 0% allowable exceedance frequency for dry weather conditions is appropriate for the dry weather TMDLs.

We do, however, acknowledge that the study referenced by the commenter should be included in the discussion of the Technical Report. The following paragraph will be added after the second paragraph of Section 4.2.1 in the Technical Report (page 34) and the report added to the references:

The Southern Coastal California Water Research Project's (SCCWRP) Study published and titled, *Fecal Indicator Bacteria (FIB) levels during dry weather from southern California reference streams* (Tiefenthaler, et al., 2008) shows that exceedances of REC-1 WQOs in natural streams typically occur at levels below State water quality standards during dry weather conditions. Results of the study also indicated that exceedances of the single sample maximum WQOs during dry weather conditions do occur. Additional studies may indicate that an allowable exceedance frequency for dry weather may be appropriate.

Comment 3

The underlying assumption that surface runoff is only generated by anthropogenic activities is also inaccurate. There are creeks that flow during dry weather. Natural springs and groundwater inputs into creeks and MS4 systems also contribute to non anthropogenic dry weather flows. The factual data must be acknowledged in the TMDL, and an appropriate load assigned to this nonpoint source, with the MS4 Permittees not being held responsible for these loads.

Response: The assumption is that *surface runoff* during dry weather is generated only by anthropogenic activities. Groundwater inputs and natural springs are not surface runoff. At this time, there is insufficient data about bacteria loads associated with groundwater inputs and natural springs that results in flow in stream systems. Historically, stream systems in the region were ephemeral or intermittent. With the increased development, flows in some streams have become less ephemeral or intermittent and more perennial, which is likely due to the anthropogenic influences on the landscape of most watersheds in the San Diego Region, including increased groundwater levels.

Additional studies may be performed to characterize the loads associated with groundwater inputs and natural springs that occurs in the stream systems in the region which may affect the allocation of the dry weather TMDLs. Additional studies may also be performed to identify an allowable exceedance frequency for the dry weather TMDLs which may be applied with the reference system approach or natural sources exclusion approach.

In any case, until more data regarding groundwater inputs and natural springs are collected, the assumption that all dry weather *surface runoff* flows originate from the land uses associated with Municipal MS4s is appropriate.

Comment 4

Caltrans and other land use dischargers have been allocated a WLA/LAs of zero during dry weather based on the invalid assumption that there is no surface runoff discharge to receiving waters from these facilities during dry weather and thus that they are “not likely to discharge bacteria” (Page 82 of Technical Report). These are false assumptions. Because Caltrans and agricultural uses, for example, irrigate during dry weather, some amount of runoff occurs and this runoff likely conveys bacteria through the MS4 to the receiving water. These discharges are either non-point sources of bacteria, or are non municipal point discharges and as such, again the MS4 Permittees cannot lawfully be required to monitor and otherwise be responsible for these discharges. The TMDL must therefore be revised so that proper loads and waste loads are assigned, and the City and other MS4 Permittees are not forced to address loads they are not responsible for.

Response: If a source is assigned a WLA or LA of zero, bacteria loads from that source is not expected or allowed under the TMDL. If there are discharges from other sources (e.g., Caltrans or agriculture) during dry weather conditions to the Phase I MS4s, those discharges become the responsibility of the Phase I MS4s under their NPDES requirements. That responsibility primarily involves investigating, confirming, and informing the San Diego Water Board of their findings. If investigations indicate that discharges from other sources are significant (i.e., causing discharges from the Phase I MS4s to cause or contribute to exceedances of the water quality standards in the receiving waters), the Phase I MS4s have the responsibility under their NPDES requirements to notify the San Diego Water Board so that it may impose further regulation, if appropriate. Further regulation will most likely take the form of new or revised waste discharge requirements, NPDES requirements, or conditional waiver requirements. Please also see the response in Section 2.7.2.

Comment 5

Page 13 states, “A TMDL is intended to fulfill two purposes: 1) calculation of the assimilative loading capacity for an impaired waterbody, and 2) development of a strategy to restore an impaired waterbody so the water quality can once again meet the water quality standards.”

Since the 2008 303(d) List has been approved by the RWQCB with several delistings of waterbodies impacted by the TMDL, it begs the question as to why the delisted waterbodies remain in this TMDL, as the purpose of the TMDL has already been accomplished. If the water quality standards are being met, based on the 2008 303(d) list, the TMDL serves no purpose for these waterbodies, at this point. As such, it is arbitrary and capricious to adopt a TMDL and accompanying load allocations and waste load allocations for water bodies for pollutants that are no longer considered to be impairing the designated uses.

Response: Please see the response in Section 2.1.

Comment 6

Although, we feel that de-listed waterbodies should be removed from this TMDL (see comment #2 above), in absence of San Diego Board’s agreement to remove delisted waterbodies, at a minimum, the following text or similar language should be added on page A1 of the BPA:

“Some of the waterbodies listed in the above table have been delisted from the 2008 303(d) list that was approved by the San Diego Board on December 16, 2009. Waterbodies that have been delisted have demonstrated that they meet water quality standards and therefore are not subject to any further action as long as monitoring data continues to support compliance with water quality standards.”

Response: Please see the response in Section 2.1.

In addition, we recognize that there have been several beach segments that have been removed from the 2008 303(d) List. The last paragraph on page A1 of the draft Basin Plan amendment and appropriate text in the draft Technical Report will be revised as follows:

~~Beginning with the 2008 303(d) List, specific beach segments of the Pacific Ocean shoreline are listed individually.~~—The TMDLs that have been developed for the Pacific Ocean shorelines are ~~assumed to be~~ applicable to all the beaches located on the shorelines of the hydrologic subareas (HSAs), hydrologic areas (HAs), and hydrologic units (HUs) listed above. Beginning with the 2008 303(d) List, specific beach segments of the Pacific Ocean shoreline are listed individually. Specific beach segments from some of the Pacific Ocean shorelines listed in the above table have been delisted from the 2008 303(d) list that was approved by the San Diego Board on December 16, 2009.

Comment 7

The table in Appendix Q, Small Municipal Separate Storm Sewer Systems in the Revised Bacteria TMDLs Project I Watersheds, must be revised to identify the appropriate waterbody which the facility is impacting.

Response: The list provided in Appendix Q lists the small MS4s (or Phase II MS4s) that may contribute to the bacteria loads in the watersheds included in these TMDLs. If any of them are identified a significant sources of bacteria, those Phase II MS4s may require additional regulation by the San Diego Water Board.

Comment 8

Page 40 of the Technical Report states, “However, if adequate data are collected to characterize dry weather flows and bacteria densities using a statistical approach, the reference system approach may be an option that would allow an exceedance frequency to be included with the dry weather numeric targets in the dry weather TMDLs to revise the final dry weather targets in this TMDL project.” Unfortunately, however this language does not appear in the Basin Plan Amendment as it should. Please include this language in the BPA. We suggest, at a minimum, the following changes on page 12, #28 of the BPA:

“At the end of the dry weather TMDL compliance schedule, the 30- day geometric mean REC-1 WQOs for dry weather days must be met 100 percent of the time, or must be consistent with the allowable exceedance frequency established for the receiving water.”

Response: The current dry weather allowable exceedance frequency of the 30-day geometric mean REC-1 WQOs is 0 percent for all waterbodies included in these TMDLs. If an allowable exceedance frequency greater than 0 percent for dry weather can be established, a future Basin Plan amendment can include this proposed revision in the appropriate places of the provisions

for these TMDLs. Until then, a 0% allowable exceedance frequency for dry weather conditions is appropriate for the dry weather TMDLs. Also, please see the response to Comment 2.

Comment 9

“The concentration based TMDLs will be used to determine compliance with the TMDLs in the receiving waters.”

This statement is in conflict with the introduction to Appendix P of the Technical Report (Recommended Components for Bacteria Load Reduction Plans and Comprehensive Load Reduction Plans) which states that the BLRP or CLRP is ‘the dischargers’ opportunity to propose methods for assessing compliance with the WQBELS.’ The BLRP/CLRP language is consistent with what was envisioned for compliance during the SAG development process. Changing to concentration-based waste load allocations is thus in direct conflict with the stakeholder process and the language provided in Appendix P.

Moreover, it is clear that the federal Clean Water Act does not require that MS4 Permittees strictly comply with any waste load allocations in a TMDL, i.e., either concentration-based or otherwise. In a November 22, 2002 U.S. EPA Guidance Memorandum (Exhibit “1” hereto) entitled, “Establishing Total Maximum Daily Loads (TMDL) Waste Load Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs,” EPA established federal policy to be utilized in developing TMDLs when addressing storm water discharges. Such policy makes clear that because of the problems in frequency and variability with storm water, that MS4 Permit limits to comply with a TMDL typically should be expressed as Best Management Practices (BMPs), that numeric limits in such permits will only be used in rare instances, and, importantly, that the TMDLs should themselves “reflect” this BMP approach. According to this EPA TMDL Guidance Memorandum:

EPA expects that most WQBELS [water quality based effluent limits] for NPDES regulated municipal and small construction storm water discharges will be in the form of BMPs, and that **numeric limits will be used only in rare instances.**

When a non-numeric water quality based effluent limit is imposed, the permit’s administrative record, including the fact sheet when one is required, needs to support that the BMPs are expected to be sufficient to implement the WLA in the TMDL. (Id. at p. 2; emphasis added.)

EPA’s policy recognizes that because storm water discharges are due to storm events that are highly variable in frequency and duration and are not easily characterized, **only in rare cases will it be feasible or appropriate to establish numeric limits for municipal and small construction storm water discharges.** (Id. at p. 4.)

Under certain circumstances, BMPs are an appropriate form of effluent limits to control pollutants in storm water. See 40 C.F.R. § 122.44(k)(2) & (3). If it is determined that a BMP approach (including an iterative BMP approach) is appropriate to meet the storm water component of the TMDL, EPA recommends that the TMDL reflect this. (Id. at p. 5.)

In conjunction with the above, we are concerned about the agreed upon approach discussed during the stakeholder process getting lost at such time as the TMDL is to be incorporated into the NPDES Permits, just as the new MS4 Permit approved in December 2009 for South Orange

County itself includes, concentration-based numeric targets for the Baby Beach TMDL (which also went against the intent of BMP-based compliance approach that was developed and agreed upon during the TMDL stakeholder meetings). We commented on this issue for the MS4 Permit, but these comments were not addressed, and yet we continue to be assured that “TMDL staff will coordinate with NPDES Permit staff”; however our recent experience proves differently. As such, as the EPA TMDL Guidance Memorandum recommends that the TMDL itself reflect that it will be implemented through a BMP approach, the proposed TMDL must be revised at this time to “reflect” this approach.

Response: There is no conflict with the statement in Appendix P. The key is that compliance with the TMDLs will be assessed *in the receiving waters*, rather than in the effluent from the MS4s. If the REC-1 WQOs and allowable exceedance frequencies are met *in the receiving waters*, the assumption is that the effluent discharged by the MS4s, Caltrans, and Agriculture are meeting their WLAs and LAs.

The BLRPs or CLRPs will be the framework of monitoring, BMP implementation, and other studies and actions that the dischargers will implement over the course of the TMDL compliance schedule to achieve the TMDLs and restore the water quality standards in the receiving waters. Source identification will be an important element of the monitoring so BMP implementation can be properly focused. Other studies may also be performed to identify and establish region or watershed specific wet weather and/or dry weather allowable exceedance frequencies. Studies could also collect data to support the application of a natural sources exclusion approach if natural sources are truly the cause of continued exceedances even after anthropogenic sources are controlled.

Also, please see the response in Section 2.7.1.

Comment 10

Page 15, #35. Economic analysis is inadequate. We continue to dispute that an adequate economic analysis was conducted (the economic factor discussion is on Page 230 of the Technical Report). The vague statement indicating that the San Diego Regional Board has considered the costs of the reasonable foreseeable methods of compliance is not adequate, nor correct. The rudimentary calculations and astronomically large range of cost provided is not adequate and there appears to be no consideration of the actual likely costs of compliance, nor any consideration of whether or not these TMDLs are “reasonably achievable.” (See California Water Code sections 13241 and 13000.) What is the rationale supporting the assumption that only 10% of the watershed will need to be treated to achieve the TMDL goals? Due to proliferation and regrowth, the evidence shows that treating 10% of the watershed will not result in compliance and therefore the low-ended and very wide ranging estimates of \$50,000 to \$973,000,000 for treating only 10% of the watershed only reinforce the fact that the TMDL has not been developed in accordance with the analysis required under CWC sections 13241/13000. We anticipate that we will need to treat much more than 10% of the watershed to meet wet and dry weather TMDLs, and the costs in reality will escalate accordingly. The conclusion that only 10% of the watershed will require treatment is not supported by the evidence, and the adoption of the TMDL based on this incorrect assumption would be arbitrary and capricious.

The requirement for the Board to consider “economics” as well as whether the TMDLs “could reasonably be achieved,” along with other factors as set forth in CWC sections 13000 and 13241 must be met as a part of the TMDL development process. CWC section 13000 requires a consideration by the Board of “all demands being made and to be made” on the subject waters bodies, including the “total values involved, beneficial and detrimental, economic and social, tangible and intangible.” (CWC § 13000.) CWC section 13241 specifically then requires the Boards, when developing water quality objectives, to consider a series of factors including but not limited the “environmental characteristics of the hydrographic unit under consideration,” as well as whether the water quality conditions “could reasonably be achieved through the coordinated control of all factors which affect water quality in the area,” and “economic considerations.” (CWC § 13241(b), (c) & (d).)

The proposed TMDL has not been developed in accordance with CWC sections 13000 and 13241. For example, the recent data not considered by Board Staff on the number of exceedances in dry weather runoff shows that there are natural dry weather loads of bacteria that have not been accounted for in the TMDL. Thus, without allowing for a certain number of exceedances to accommodate these natural loads, the TMDL as written is not “reasonably achievable.” Similarly, the TMDL does not include any analysis of the type, level and extent of structural best management practices (“BMPs”) that will be needed to meet the requirements of the TMDL, and the assumption that only 10% of the watershed will require treatment, as discussed above, is not supported by the evidence. There is no discussion of how effective the non-structural BMPs are expected to be towards meeting the waste load allocations, and it appears clear that a number of structural BMPs will likely be necessary in order to meet the proposed concentration-based waste load allocations. Yet there is no discussion as to the amount of land and the practicability of installing structural based BMPs throughout a good portion of the various jurisdictions to meet the bacterial limits in question, and nor is there any good faith analysis of the true potential economic impacts from installing the necessary structural TMDLs to strictly comply with the numeric waste load allocations. Instead, the TMDL includes a completely arbitrary and meaningless range of costs to comply with the TMDL, i.e., a range of \$50,000 to \$973,000,000 to comply. In short there is no analysis as required under CWC sections 13241/13000, of the true potential economic impacts and costs to comply with this TMDL, and the proposed TMDL is therefore defective and cannot lawfully be adopted at this time.

In EPA’s “Guidance for Developing TMDLs in California,” dated January 7, 2000 (“EPA California TMDL Guidance”), (Exhibit “2” hereto), EPA recognized that although its regulations do not require “any particular form of economic analysis,” it also recognized that “the Office of Chief Counsel, State Water Resources Control Board, issued the following memorandum addressing economic analysis requirements under state law.” The Office of Chief Counsel Memorandum referenced by EPA was a Memorandum dated October 27, 1999 from Sheila Vassey, Office of Chief Counsel for the State Board, and was entitled “Economic Considerations in TMDL Development and Basin Planning” (hereafter “Vassey Memo,” a copy of which is marked hereto and attached as Exhibit “3”). In the Vassey Memo (cited in EPA’s California TMDL Guidance), the Chief Counsel’s Office concluded as follows:

Porter-Cologne requires that the Regional Water Boards take “economic considerations,” among other factors, into account when they establish water quality objectives. . . .

Attached to this memorandum is a 1994 memorandum containing guidance on the consideration of economics in the adoption of water quality objectives. The key points of this guidance are:

- **The Boards have an affirmative duty to consider economics when adopting water quality objectives.**
- **At a minimum, the Boards must analyze: (1) whether a proposed objective is currently being attained; (2) if not, what methods are available to achieve compliance with the objective; and (3) the cost of those methods.**
- **If the economic consequences of adoption of a proposed objective are potentially significant, the Board must state on the record why adoption of the objective is necessary to ensure the reasonable protection of beneficial uses or the prevention of nuisance.** (Exhibit “3,” Vassey Memo, pp. 3-4.)

The State Board’s Chief Counsel Memo further provides that the regional boards must comply with CEQA when they amend their basin plans (*id.* at 4), and that CEQA requires the Water Boards to conduct an environmental analysis of the reasonably foreseeable methods of compliance with performance standards or treatment requirements. In doing so, “[t]hey must consider economic factors in this analysis.” (See Exhibit “3,” Vassey Memo, p. 4; and Public Resources Code [“PRC”] § 21159.)¹

The Chief Counsel concluded as follows:

Thus, the Regional Water Board must identify the reasonably foreseeable methods of compliance with the wasteload and load allocations and consider economic factors for those methods. This economic analysis is similar to the analysis for water quality objectives discussed above. (*Id.* at p. 6, emphasis added.)

Accordingly, pursuant to CWC sections 13241 and 13000, and PRC section 21159, as underscored by the administrative interpretation provided in the Chief Counsel’s Memo, the Board is required to consider “economics” before adopting the TMDL.

In this case, there has been no real consideration of whether the TMDL in question, particularly if it is intended to be applied as a concentration-based effluent limit in the Municipal NPDES Permits, “could reasonably be achieved,” and nor has there been any true consideration, of the “economic” impacts from such a TMDL, or any of the other factors and consideration under CWC sections 13000 and 13241. The proposed TMDL should therefore not be adopted until the requirements of these sections have been met.

Response: Please see the response in Section 2.5

In addition, although a full economic analysis is not required pursuant to Water Code section 13241, we disagree that the economic analysis is inadequate. An economic analysis is included as part of the Environmental Analysis in Appendix R to the draft Technical Report. As part of CEQA, we are required to consider the costs of reasonably foreseeable methods of compliance with the proposed TMDL, such as implementation of reasonably foreseeable types of BMPs for the purpose of bacteria reduction. This economic analysis presents of a variety of BMP types and includes the range of costs and rates of potential effectiveness for each type. We have considered this information for implementation planning purposes – specifically in setting the

length of the compliance period. Providing a cost benefit analysis based on BMP effectiveness rates is beyond the scope of the CEQA requirements. Furthermore, we are not required to speculate about site-specific projects that persons or entities identified as sources might implement or which BMP will be the most appropriate based on cost and effectiveness.

While 100 percent compliance is ultimately required by the proposed TMDL, treatment of 100 percent of the land may not be required to achieve compliance. In the analysis, we do not assume that every watershed will require 100 percent of the land to be treated with all of the potential BMP options; therefore, cost estimates are provided in increments of 10 percent to allow for upward scaling of costs, since the amount of treatment and methods needed to achieve compliance with the proposed TMDL may vary from watershed to watershed. For example, using the 10 percent cost estimates provided in Table 13-3, a cost estimate for 100 percent land treatment could easily be calculated by multiplying the 10% cost estimate by 10, or by 5 for 50 percent, or 8 for 80 percent, etc.

The substitute environmental documents contain sufficient information and analysis for the public to understand the potential adverse environmental impacts of the project, including the impacts from any possible combination of BMPs and associate potential costs, and to provide the San Diego Water Board with meaningful discussion and comment on these impacts. The CEQA does not require the level of detail requested in the comment for a planning level analysis. The dischargers are responsible, as governing entities with land use authority, for determining the specific BMPs, cost, and cost benefit analysis for project implementation at specific locations, and for evaluating the potential site specific environmental impacts of those BMPs.

Comment 11

Page A12 & A65 of the BPA, we disagree that the beach segments began to be listed separately with the 2008 303(d) List; the 2006 303(d) lists specific beach segments where the impairment is located. Therefore, the identified beach segments should be included in the Tables on pages A12 & A25-A35. We have provided an example with information taken directly from the 2006 303(d) List. See suggested changes in red text below.

| Watershed | Type of Listing | Waterbody Name ^a | Number of Listings | Impairment located at |
|-----------------------|-----------------|---------------------------------------|--------------------|--|
| Aliso HSA (901.13) | Creek | Aliso Creek | 3 | |
| | Estuary | Aliso Creek (mouth) | | |
| | Shoreline | Pacific Ocean Shoreline, Aliso HSA | | <i>North Beach Creek, San Juan Creek (large outlet), Capistrano Beach, South Capistrano Beach at Beach Road.</i> |

Response: The listings given in the table on page A12 are accurate. Also, please see response in Section 2.1.

Comment 12

Page A14 of the BPA, footnote 5 is inaccurate. As we discussed with your staff and EPA staff at the stakeholder meeting held on January 7, 2010, we suggest the following language changes or similar language:

5 Available water quality data from San Diego Region reference systems during time of development indicated that exceedances of the single sample WQOs during dry weather conditions are uncommon. However, recently published data by Southern Coastal California Water Research Project (SCCWRP) Study titled, *Fecal Indicator Bacteria (FIB) levels during dry weather from southern California reference streams*, 2008. LL Tiefenthaler, ED Stein, GS Lyon. Technical Report 542, indicated to the contrary and that, “A total of 18.2% of the indicator bacteria samples (for all three indicators) from the natural sites exceeded daily (single sample) water quality standards. Approximately 1.5%, 14%, and 3% of *E. coli*, enterococci, and total coliforms, respectively, exceeded single sample water quality criteria.” and the applicability of an allowable exceedance frequency for dry weather TMDLS will be evaluated further. Furthermore, if the exceedance of the single sample WQOs during dry weather is unlikely, exceedances of the geometric mean are even more unlikely.

In addition, the following changes should be made:

The allowable load (i.e., TMDL) that is calculated based on these numeric targets consists of the sum of two parts: 1) the bacteria load that is calculated with the REC-1 WQOs and, 2) the bacteria load that is associated with the allowable exceedance frequency, calculated using the existing load in exceedance of the REC-1 WQOs on the allowable exceedance days. For wet weather, the allowable exceedance days are calculated based on the allowable exceedance frequency and total number of wet days in a year. For dry weather TMDLS using a reference system approach, the allowable exceedance days are calculated based on the allowable exceedance frequency and the total number of dry days in a year.

In addition, please add the following underlined sentence to the end of footnote 4:

4 In the calculation of the wet weather TMDLS, the San Diego Regional Board chose to apply the 22 percent allowable exceedance frequency as determined for Leo Carrillo Beach in Los Angeles County. At the time the wet weather watershed model was developed, the 22 percent exceedance frequency from Los Angeles County was the only reference beach exceedance frequency available. The 22 percent allowable exceedance frequency used to calculate the wet weather TMDLS is justified because the San Diego Region watersheds’ exceedance frequencies will likely be close to the value calculated for Leo Carrillo Beach, and is consistent with the exceedance frequency that was applied by the Los Angeles Regional Board. Ongoing studies by SCCWRP and the dischargers indicate there are more local reference beaches that are appropriate for these TMDLS. The information and evidence justify revising the TMDL to account for these additional references.

Response: The suggested revisions are appreciated, but current text is accurate. When sufficient evidence is provided, a future Basin Plan amendment can include the suggested revisions in the appropriate places of the provisions for these TMDLS. Also, please see the response to Comment 2.

Comment 13

On page A16 of the BPA, the following underlined text should be added to the footnote a. under both tables and in the Table on A25-A35, as appropriate:

a. Percent of wet days (i.e., rainfall events of 0.2 inches or greater and the following 72 hours) allowed to exceed the wet weather numeric targets. Exceedance frequency based on reference system in the Los Angeles Region. The information and evidence justify using a different exceedance frequency for wet weather TMDLS, and as such the reference frequency is to be recalculated/ revised.

a. Percent of dry days (i.e., days with less than 0.2 inch of rainfall observed on each of the previous 3 days) allowed to exceed the dry weather numeric targets. The information and

evidence justify using a reference system for the dry weather TMDLs, and as such the allowable exceedance frequency for dry weather TMDLS is to be recalculated/revised.

Response: The suggested revisions are appreciated, but current text is accurate. When sufficient evidence is provided, a future Basin Plan amendment can include the suggested revisions in the appropriate places of the provisions for these TMDLs. Also, please see the response to Comment 2.

Comment 14

On page A20 of the BPA, please add the following underlined text to foot note 7 and correspondingly in the footnotes to the Tables on A26:

In the calculation of the wet weather TMDLs, the San Diego Regional Board chose to apply the 22 percent allowable exceedance frequency as determined for Leo Carrillo Beach in Los Angeles County. At the time the wet weather watershed model was developed, the 22 percent exceedance frequency from Los Angeles County was the only reference beach exceedance frequency available. The 22 percent allowable exceedance frequency used to calculate the wet weather TMDLs is justified because the San Diego Region watersheds' exceedance frequencies will likely be close to the value calculated for Leo Carrillo Beach, and is consistent with the exceedance frequency that was applied by the Los Angeles Regional Board. New information is available showing that more applicable reference system data is available. The information and evidence justify revising the TMDL for dry and wet weather to account for this information and the TMDLs will be recalculated/revised accordingly.

Response: The suggested revisions are appreciated, but current text is accurate. When sufficient evidence is provided, a future Basin Plan amendment can include the suggested revisions in the appropriate places of the provisions for these TMDLs. Also, please see the responses to Comment 2 and in Section 2.3.

Comment 15

On page A42 of the BPA:

- a. How is the San Diego Board going to identify Phase II MS4s as "significant sources of bacteria discharging to the receiving waters and/or Phase I MS4s?"
- b. It appears that Phase I and Phase II MS4s are being held to different standards – the implementation plan indicates that Phase II MS4s are required to implement a SWMP with the goal of reducing the discharge of pollutants to the maximum extent practicable (page 154), while the Phase I MS4s are facing compliance with numerical effluent limitations on the amounts of specified pollutants that may be discharged and/or specified best management practices (BMPs) designed to minimize water quality impacts. These numerical effluent limitations and BMPs or other non-numerical effluent limitations must implement both technology based and water quality-based requirements of the Clean Water Act. Technology-based effluent limitations (TBELs) represent the degree of control that can be achieved by point sources using various levels of pollution control technology. (Page 148). The standard for both Phase I and Phase II MS4 Permittees should be the same, *i.e.*, the MEP standard, and the use of a different standard for Phase II versus Phase I MS4 Permittees is arbitrary and capricious.

Response: Several municipalities have noted in the past that Phase II MS4s are discharging into their MS4 systems and/or the receiving waters. The municipalities, however, have not provided any evidence to show that discharges from those facilities are significant sources of bacteria. When the San Diego Water Board is provided the evidence, as a first step the Phase II MS4s will be regulated under the General NPDES Requirements for Small MS4s. If, however, a Phase II MS4 remains a significant source, the San Diego Water Board will issue individual NPDES requirements with the same requirements of the Phase I MS4s. Please see the description of how Phase II MS4 will be addressed on pages 105-106 of the draft Technical Report and pages A42-A43 of the draft Basin Plan amendment. Also, please see the response in Section 2.7.2.

Comment 16

On page A45 of the BPA, has an evaluation of the WDRs and NPDES requirements for Concentrated Animal Feeding Operations (CAFOs) been conducted, and if so, are there any recommendations for a more aggressive program? If an evaluation has not occurred, it should occur, and the results of that evaluation should be included in this BPA. It is arbitrary and capricious to do otherwise.

Response: Because CAFOs have not been assigned a WLA, by default they are assigned a WLA of zero. A zero WLA means that any discharge of waste from a CAFO to surface waters is not allowed and would be considered out of compliance with the requirements of the TMDL. In general, NPDES requirements for CAFO do not allow for the direct discharge of surface runoff to receiving waters. This is consistent with a WLA equal to zero.

Comment 17

Page 165 of Technical Report, there is no standard for Total Coliform in the Basin Plan and therefore Total Coliform should be removed from Table 11-2. Superscript f should be deleted as well.

Response: The commenter is correct that the total coliform water quality objectives do not apply to the creeks. The tables with the Receiving Water Limitations for Creeks (see page A52 of the draft Basin Plan amendment and Table 11-2 on page 117 will be revised as follows:

Table 11-2. Receiving Water Limitations for Creeks

| Indicator Bacteria | Wet Weather Days ^a | | Dry Weather Days ^b | |
|---------------------------------------|---|---|---|--|
| | Wet Weather Numeric Objective ^c (MPN/100mL) | Wet Weather Allowable Exceedance Frequency ^d | Dry Weather Numeric Objective ^e (MPN/100mL) | Dry Weather Allowable Exceedance Frequency |
| Fecal Coliform | 400 | 22% | 200 | 0% |
| Total Coliform^f | 10,000 | 22% | 1,000 | 0% |
| Enterococcus | 61 (104) ^g | 22% | 33 | 0% |

- a. Wet weather days defined as days with rainfall events of 0.2 inches or greater and the following 72 hours.
- b. Dry weather days defined as days with less than 0.2 inch of rainfall observed on each of the previous 3 days.
- c. Wet weather numeric objectives based on the single sample maximum (or equivalent) water quality objectives in the Water Quality Control Plan for the San Diego Basin (1994). Compliance with the wet weather TMDLs in the receiving water is based on the frequency that the wet weather days in any given year exceed the wet weather numeric objective, but 30-day geometric mean must also be met.
- d. The wet weather allowable exceedance frequency is set at 22%. In the calculation of the wet weather TMDLs, the San Diego Regional Board chose to apply the 22 percent allowable exceedance frequency as determined for Leo Carillo Beach in Los Angeles County. At the time the wet weather watershed model was developed, the 22 percent exceedance frequency from Los Angeles County was the only reference beach exceedance frequency available. The 22 percent allowable exceedance frequency used to calculate the wet weather TMDLs is justified because the San Diego Region watersheds' exceedance frequencies will likely be close to the value calculated for Leo Carillo Beach, and is consistent with the exceedance frequency that was applied by the Los Angeles Regional Board.
- e. Dry weather numeric objectives based on the 30-day geometric mean (or equivalent) water quality objectives in Water Quality Control Plan for the San Diego Basin (1994). Compliance with the dry weather TMDLs in the receiving water is based on the frequency that the dry weather days in any given year exceed the dry weather numeric objective.
- ~~f. Wet and dry weather numeric objectives for total coliform apply at the point in a creek that discharges to a beach, bay, or estuary.~~
- ~~f.g. A wet weather numeric objective for Enterococcus of 104 MPN/100mL may be applied as a receiving water limitation for creeks, instead of 61 MPN/100mL, if one or more of the creeks addressed by these TMDLs (San Juan Creek, Aliso Creek, Tecolote Creek, Forrester Creek, San Diego River, and/or Chollas Creek) is designated with a "moderately to lightly used area" or less frequent usage frequency in the Basin Plan. Otherwise, the wet weather numeric objective of 61 MPN/100mL for Enterococcus will be used to assess compliance with the wet weather allowable exceedance frequency.~~

Comment 18

When was the last time that the conditional waivers for agriculture were evaluated? It appears that the general conditional waivers will expire December 31, 2012. When will San Diego Board begin to evaluate these to decide whether or not they are sufficient to implement the agriculture load allocations? How will the San Diego Water Board ensure that such owners and operators are not discharging in excess of their loads?

Response: The current conditions of the waiver require enrollment, implementation of BMPs, development of a monitoring program, and a year of monitoring by the owners and operators of irrigated agriculture operations. The results of the monitoring will provide much needed data to identify whether agriculture is a source of several pollutants in several watersheds in the San Diego Region. The Phase I MS4s are also encouraged to monitor at the boundaries between their jurisdictions and agricultural operations (and other dischargers). The conditions of the waiver will likely be modified during the next waiver renewal. The requirements of these TMDLs will likely be a significant factor in the development of any new conditions for the waiver.

The conditional waivers for agriculture were last adopted by the San Diego Water Board in October 2007. As required under Water Code section 13267, the conditional waiver will have to be re-evaluated and renewed or terminated after December 31, 2012. Re-evaluation and renewal will likely begin sometime in 2011.

Comment 19

Page A49. The City disagrees with the statement “Implementation of these TMDLs by the San Diego Water Board should not require any special studies to be conducted by the dischargers or other entities.” During discussions at the January 7 stakeholder meeting, it was acknowledged that this TMDL is based on old data or a lack of data and that special studies will most likely be part of the dischargers Load Reduction Plan. It is thus not clear why this statement was made, and discussions regarding old data and lack of data illustrate the fact that the Board does not have sufficient data at this time to adopt the proposed TMDL.

Response: We agree that the dischargers will likely *want* to conduct special studies; however, implementation of the TMDLs by the San Diego Water Board does not *require* the dischargers conduct special studies. If the dischargers would like to modify elements of the TMDLs (e.g., allowable exceedance frequencies), the San Diego Water Board will support those efforts, but they are not a requirement.

Comment 20

The Environmental Review prepared by Board Staff in an effort to comply with the California Environmental Quality Act (“CEQA”) is deficient and does not comport with CEQA. There is a wholly inadequate analysis of the “reasonably foreseeable” BMPs that will need to be utilized in type, size, number and location, and as such, the CEQA Environmental Review prepared by Board Staff to assess the environmental impacts from the installation of the “reasonably foreseeable” BMPs, is entirely lacking in substance.

For example, the analysis under the section entitled “The Utilities and Service Systems. a” on page R-51 of the Environmental Analysis and Checklist (“EAC”), provides that the “Installation of structural BMPs may require alterations or installation of new power or natural gas lines” but, “that the installation of structural BMPs will result in a substantial increased need for new systems, or substantial alterations to power or natural gas utilities, is not reasonably foreseeable, because none of these BMPs are large enough to substantially tax current power or natural gas sources.” Yet, there is no analysis in the EAC describing the number and size of treatment facility BMPs, such as the number and necessary expansions to existing sanitary sewer facilities, to support this statement. In fact, the EAC makes no attempt to describe how large of a BMP is too large “to substantially tax current power or natural gas sources,” and in general wholly fails to describe the “reasonably foreseeable” approximate number, type, size and location of the various types of structural BMPs that will be needed to meet the TMDL’s waste load allocations, or even the extent of the non-structural BMPs that will be needed (e.g., the extent street sweeping will need to be increased, in what areas, the extent of the increase, etc).

Complying with CEQA necessarily involves some degree of forecasting. “While forecasting the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.” (CEQA Guidelines, 14 CCR § 15144.) Here, the Board has ignored this mandate.

The discussion contained throughout the EAC simply deems impacts to be insignificant under the presumption that the BMPs and mitigation measures ultimately selected to implement the TMDLs will be properly designed and sited by local agencies. The Board makes no effort to

analyze “reasonably foreseeable” physical changes to the environment necessitated by the TMDL.

As one example, the Board’s discussion relating to whether the proposal will result in any “change in climate” consists entirely of the following conclusory statement: “Non-structural and/or structural BMPs would not be of the size or scale to result in alterations of air, movement, moisture, or temperature, or any change in climate, either locally or regionally.” (EAC, p. R-25.) This analysis completely fails to adequately evaluate the project’s impacts on the climate.

With the adoption of SB 97 in 2007, the California legislature directed that greenhouse gas (“GHG”) emissions and the effects of climate change be included in future analyses under CEQA. More specifically, SB 97 directs the State Office of Planning and Research (“OPR”) to develop draft CEQA Guidelines “for the mitigation of GHG emissions or the effects of GHG emissions” by July 1, 2009 and directs the Natural Resources Agency to certify and adopt revised CEQA Guidelines by January 1, 2010.

Proposed CEQA Guidelines, received by the Natural Resources Agency on April 13th, 2009, outline in 14 CCR section 15064.4 the following responsibilities for Lead Agencies in determining the significance of GHG emissions:

a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

(1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; or

(2) Rely on a qualitative analysis or performance based standards.

b) A lead agency may consider the following when assessing the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project’s incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Proposed subsection (c) to 14 CCR section 15126.4 provides additional guidelines on how to minimize and mitigate a project's GHG emissions. While the Board, for example, recognizes potential impacts of air quality due to increased traffic, it makes no attempt to quantify foreseeable increases in vehicular emissions. Moreover, the analysis similarly fails to estimate GHG emissions as a result of (1) increased energy usage, (2) increased emissions from organic sources, or (3) increased solid waste generation.

In short, the Board makes no effort to describe, calculate or estimate the type and number of BMPs that will generate GHG emissions, nor the *amount* of GHG emissions that will result from the construction, installation, operation, and maintenance of these BMPs. Nor does the Board's Environmental Review make any attempt to otherwise determine the reasonably foreseeable BMPs needed to meet the TMDL in general, and thus generally fails to analyze the reasonably foreseeable impacts to the environment from the implementation of these expected BMPs.

Response: The level of specificity in the substitute environmental documents is adequate for the purposes of this Basin Plan amendment. Appendix R to the Technical Report (Environmental Analysis and Checklist) contains adequate information and analysis for the public to understand the potential adverse environmental impacts of the project.

The CEQA provisions allow the San Diego Water Board to limit analysis in these substitute environmental documents to broad environmental issues which are ripe for decision at the TMDL adoption stage. At this stage, the San Diego Water Board is not required to evaluate environmental issues associated with specific projects undertaken to comply with the TMDLs. CEQA provisions allow for project level environmental considerations to be deferred so that more detailed examination of the effects of these projects in subsequent CEQA environmental documents can be made by the appropriate lead agency.

The CEQA requires that the San Diego Water Board provide substitute environmental documents that contain sufficient information and analysis for the public to understand the potential adverse environmental impacts of the project, and to provide the San Diego Water Board with meaningful discussion and comment on these impacts. Our substitute environmental documents do that by describing a range of potential structural and non-structural controls the dischargers could construct or implement to meet the wasteload allocations (WLAs) and load allocations (LAs) required to achieve these TMDLs. The documents also discuss the potential adverse environmental impacts associated with those controls. The CEQA does not require the San Diego Water Board to speculate on the location or size of specific structural controls that the dischargers might choose to implement.

The San Diego Water Board appreciates the City's efforts in moving forward with BMP planning, and is willing to discuss potential BMP siting and design issues, and different compliance monitoring approaches that could be used. However, we do not have the authority to delegate which methods or BMPs must be used to comply with the bacteria TMDLs. Additionally, it is not the purpose of the TMDLs to provide complete guidance for compliance. The San Diego Water Board has flexibility in making waste discharge requirements consistent with the requirements and assumptions of any WLAs and LAs required by the applicable TMDLs and in establishing monitoring programs to gage compliance.

The CEQA does not require the level of detail requested in the comment for a planning level analysis. The dischargers are solely responsible for determining the specific BMPs that will be

implemented at specific locations, and for evaluating the potential site specific environmental impacts of those BMPs. Ultimately, the dischargers are solely responsible for complying with all specific CEQA requirements.

As alluded to by the commenter, the environmental analysis includes analyses of several other potential impacts that may result in increases in emissions, such as air, transportation, energy, and utilities and service systems, but did not specifically discuss greenhouse gas emissions. However, non-structural and/or structural BMPs should not substantially increase greenhouse gas emissions. Operation of street sweepers, construction, and maintenance vehicles could increase the use of fossil fuels, and some types equipment used in structural BMPs may consume electricity to operate pumps, etc., which could increase greenhouse gas emissions. These greenhouse gas emissions should fall within the current emissions expectations for the region. The additional greenhouse gas emissions could be mitigated and reduced if non-CO2 generating alternative fuels and/or renewable energies are used to power vehicles and equipment, or the use of vehicles is minimized by reducing of trips needed to perform multiple tasks. Additionally, some BMPs may include the use of vegetation which can also reduce emissions. These BMPs may generate additional solid waste and decaying organic matter, which can also result in increased greenhouse gas emissions. If the waste and organic matter is taken to a landfill, the methane that is generated can be harvested and used as an energy source at the site, which can offset emissions that would be generated from offsite energy sources. The potential impact to climate change is likely to be less than significant, especially if mitigation measures are implemented.

As noted in the comment, at this time the CEQA Guidelines for determining significance of greenhouse gas emissions are *proposed*. They have not yet been approved by the Office of Administrative Law (OAL) and promulgated. Therefore, the current environmental analysis is adequate for the purposes of this TMDL Basin Plan amendment.

4.4 City of Del Mar

Comment 21

The Pacific Ocean Shoreline, Miramar Reservoir was delisted for bacteria in the most recently adopted water quality impaired list or 303(d) listing, dated October 25, 2006. The listing was last approved by the State Water Resources Control Board to reflect new data and information in accordance with the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Listing Policy). The fact sheet for the Pacific Ocean Shoreline at Miramar Reservoir HA recommended the delisting of the segment using the weight of evidence and in compliance with the Listing Policy. The City recognizes that Section 303(d)(3) of the Clean Water Act states that,

“for the specific purpose of developing information, each State shall identify all waters within its boundaries which it has not identified under paragraph (I)(A) and (I)(B) of this subsection and estimate for such water the total maximum daily load [...].”

However, the City firmly believes that the inclusion of this previously delisted water body will result in valuable municipal and state resources being spent on a project that will not provide any benefit to water quality comparable to the anticipated expenditures. Limiting the Indicator Bacteria Project I TMDL to 303(d) listings allows the City to focus its resources on high priority water impairments, and future TMDLs, rather than on a segment that has effectively shown attainment of water quality objectives.

Response: In developing the BLRPs or CLRPs, we expect that the load reduction implementation actions will focus on those locations and areas where exceedances of the indicator bacteria water quality objectives continue to indicate that the impairment exists and warrant the listing on the 303(d) List.

For locations or areas that have been removed from the 303(d) List, continuing the monitoring that is already required will be the only implementation action required to achieve the TMDLs. Monitoring is already required under several other programs and regulatory requirements, thus this is not expected to increase the need for additional resources.

If, however, future monitoring data indicate that the bacteria impairment returns, the BLRPs or CLRPs need to provide a framework of the actions that will be taken to restore the impaired recreational beneficial uses. In most cases, the action will likely include investigating and locating the sources of bacteria causing the impairment, and implementing BMPs to reduce the bacteria from the controllable sources. These actions are also already requirements under the Phase I MS4 NPDES requirements.

Comment 22

If the delisted Pacific Ocean Shoreline, Miramar Reservoir segment remains a part of this proposed TMDL, the City respectfully requests that the Load Reduction Plan requirements be revised. Specifically, the City requests that the following language be added to the second paragraph on Page A65:

“For areas that are no longer on the List of Water Quality Limited Segments (303(d) List), Phase I and II MS4 dischargers and Caltrans need not prepare Bacteria Load Reduction Plans for their discharges in these watersheds, providing that attainment of WQOs continues to be demonstrated.”

Response: The Pacific Ocean Shoreline, Miramar Reservoir segment will remain as part of these TMDLs. The following language will be added after the second paragraph of section 11.5.2 of the draft Technical Report and on page A66 of the Basin Plan amendment:

For watersheds in Table 11-5 where there are no longer any impairments listed on the 2008 303(d) List, the Phase I MS4s and Caltrans are not required to submit a BLRP or CLRP within 18 months of the effective date of these TMDLs. If, however, any segment of a waterbody for the watershed (Pacific Ocean shoreline, creek, or mouth as shown in Table 11-5) is re-listed on a future 303(d) List for any type of indicator bacteria, the Phase I MS4s and Caltrans will be required to submit a BLRP or CLRP within 6 months of the adoption of the 303(d) List by the San Diego Regional Board.

Comment 23

Page A40 states that, “Municipal (Phase I and Phase II) MS4s and Caltrans are the only point sources that have been assigned WLAs”. However, the table on page A59 also lists the owners/operators of small MS4s as responsible Municipalities in all of the watersheds included in this Resolution. It is unclear in many instances throughout the Resolution as to whether Phase II MS4s (non-Municipal) are subject to certain requirements because they are not specifically listed. Therefore, the City respectfully requests that Regional Board staff review the Resolution to ensure that all Phase II MS4 (municipal and non-municipal) dischargers are included in the requirements applicable to Phase I MS4 dischargers and Caltrans. For example, Phase II MS4 discharges should be added to the Compliance Schedule on page A66 and be required to develop and submit Bacteria Load Reduction Plans (BLRPs). This language change will ensure that smaller MS4s with a high potential for discharge of bacteria loads are also included in this TMDL.

Response: Please see the responses to Comment 15 and in Section 2.7.2.

Comment 24

The City also requests that owners/operators of small MS4s be added to the Table on pages A69 and A70 as a responsible party for Items 6-13, 16, and 21.

Response: Please see the response in Section 2.7.2. “Municipal Dischargers” includes Phase I and Phase II MS4s. In order to clarify the role of the Phase I MS4s and Phase II MS4s, the following revisions will be made to the TMDL Implementation Milestones table: 1) a footnote will be added to the “Municipal Dischargers” in Items 6-13 and 21 that states, “Because there are no Phase II MS4s enrolled under the State General Permit for Small MS4s, discharges from Phase II MS4s are not permitted (i.e., WLA = 0) and Municipal Dischargers are only the Phase I MS4s in this Implementation Milestone item. When a Phase II MS4 is enrolled under the State General Permit for Small MS4s or issued an individual NPDES permit, the Municipal Dischargers will be both the Phase I MS4s and Phase II MS4s in this Implementation Milestone item”; and 2) Phase II MS4s will be added as to the Responsible Parties for Item 16.

4.5 *City of Encinitas*

Comment 25

Comprehensive Load Reduction Plans: The Revised TMDL for Indicator Bacteria allows the Phase 1 MS4s to submit Comprehensive Load Reduction Plans (CLRPs) outlining a Best Management Practice (BMP) Program that will be capable of achieving the necessary load required to attain the TMDLs in the receiving water within 18 months after the effective date of these TMDLs.

If the Phase 1 MS4s choose to submit CLRPs, the compliance targets for any additional constituents of concern have not been defined. Therefore, if BMPs are designed to support water quality objectives for Bacteria, the Phase 1 MS4s will not know what the allowable loads are for any of the additional constituents of concern that may be included in their CLRPs.

Response: Water quality standards (i.e., beneficial uses and water quality objectives) are used as the basis for developing TMDLs. For many pollutants of concern (e.g., metals, pesticides) there are numeric water quality objectives that are available, which are ultimately what is expected to be met in the receiving waters. Therefore, the water quality objectives in the Basin Plan can be used to identify target pollutant concentrations in any discharges and/or receiving waters to ensure that the effluent will not cause or contribute to the exceedance of water quality objectives in the receiving water.

Comment 26

Wet Weather Exceedance Frequencies: The Revised TMDL for Indicator Bacteria identifies exceedance frequencies for wet weather expressed as percentages. Wet weather exceedance frequencies are calculated by dividing the number of wet weather days that exceed the single sample maximum REC-1 WQOs by the total number of wet weather days during the rainy season.

This formula makes it difficult for the responsible parties to assess compliance with the TMDL until the end of the wet season and thereby does not provide the responsible parties with an opportunity to take appropriate actions or make timely changes to their programs.

Response: For TMDL compliance purposes, the wet weather exceedances will likely be assessed by the Regional Board after the end of a wet season. Determining compliance with the allowable exceedance frequency, however, does not have to be assessed at the end of the wet season (October 1 to April 30). The wet weather exceedance frequency may be calculated for each wet weather event (i.e., each storm with 0.2 inches of rainfall and the following 72 hours). With each additional wet weather event, the exceedance frequency may be recalculated until the end of the wet season. Each wet weather event can provide additional data to identify actions that can be taken to reduce exceedances in subsequent wet weather events during a wet season and subsequent wet seasons.

4.6 City of La Mesa

Comment 27

On Page A62 of Attachment A of the Tentative Resolution R9-2010-0001 and on Page 131 of the Draft Technical Report, the City of La Mesa is listed as a responsible municipality for Forrester Creek, within the Mission San Diego and Santee HAS watershed heading. No portion of the City of La Mesa is tributary to Forrester Creek. Please remove the City of La Mesa from the Responsible Municipalities grouping for this listing.

Response: We reviewed of the municipalities located within the Mission San Diego/Santee HSAs that are within the drainage area of Forrester Creek. The City of La Mesa will be removed from the list of Responsible Municipalities on pages A61 of the draft Basin Plan amendment, and page 130 of the draft Technical Report.

4.7 City of Laguna Niguel

Comment 28

A. Resolution paragraph 10, page 4: “.....At the time Resolution No. R9-2007-0044 was adopted, allowing exceedances of the REC-1 WQOs during either wet or dry weather was not authorized by the Basin Plan. The San Diego Water Board, however, recognized that exceedances of the REC-1 WQOs during both wet and dry weather was likely, and may be partially due to bacteria loads contributed from natural sources. Therefore, the San Diego Water Board agreed to develop a Reference System Anti-Degradation Approach/Natural Source Exclusion Basin Plan Amendment, which would authorize an allowance for wet or dry weather exceedances of the REC-1 WQOs based on the wet-weather natural exceedance frequencies observed in a comparable reference system; and/or based on the effective control of all anthropogenic sources of indicator bacteria, coupled with a demonstration that residual indicator bacteria densities are not indicative of an elevated human health risk. For this reason, adoption of the Bacteria TMDLs Project I Basin Plan amendment was made contingent upon the future consideration of a separate Reference System Antidegradation Approach/Natural Source Exclusion (RSAA/NSE) Basin Plan amendment by the San Diego Water Board. It was assumed that upon the subsequent adoption of the RSAA/NSE Basin Plan Amendment, Bacteria TMDLs Project I would be appropriately revised and brought back to the San Diego Water Board for re-adoption. The key revision would include incorporation of the reference system approach into the final wet weather TMDLs.....”

Response: Adoption of Resolution No. R9-2007-0044 was contingent upon adopting a subsequent Reference System Approach Basin Plan amendment for the specific purpose of applying of the reference system approach only to the wet weather TMDLs. We do recognize that the Reference System Approach Basin Plan amendment can be applied for both wet and dry weather. Finding 10 in Tentative Resolution No. R9-2010-0001 will be revised as follows:

10. Adoption of Bacteria TMDLs Project I Basin Plan Amendment Contingent Upon Adoption of Reference System Approach Basin Plan Amendment: The bacteria TMDLs adopted under Resolution No. R9-2007-0044 included “interim” and “final” wet weather TMDLs. The “interim” wet weather TMDLs were calculated to include an allowance for exceedances of REC-1 WQOs due to bacteria loads from natural sources based on the exceedances in a reference system.¹ The “final” wet weather TMDLs that were calculated did not allow for exceedances of REC-1 WQOs due to bacteria loads from natural sources. At the time Resolution No. R9-2007-0044 was adopted, allowing exceedances of the REC-1 WQOs during either wet or dry weather was not authorized by the Basin Plan. The San Diego Water Board, however, recognized that exceedances of the REC-1 WQOs during wet weather was likely, and may be partially due to bacteria loads contributed from natural sources. Therefore, the San Diego Water Board agreed to develop a Reference System Approach Basin Plan Amendment, which would authorize an allowance for wet-weather exceedances of the REC-1 WQOs based on the wet-weather exceedance frequencies observed in a reference system.

¹ A reference system is a watershed and the beach to which the watershed discharges that is minimally impacted by anthropogenic activities that can affect bacterial densities in the waterbody.

For this reason, adoption of the Bacteria TMDLs Project I Basin Plan amendment was made contingent upon the future consideration of a separate Reference System Approach Basin Plan amendment by the San Diego Water Board. It was assumed that upon the subsequent adoption of the Reference System Approach Basin Plan amendment, Bacteria TMDLs Project I would be appropriately revised and brought back to the San Diego Water Board for re-adoption. The key revision would include incorporation of the reference system approach into the final wet weather TMDLs. Specifically, the previously established “interim” wet weather TMDLs, which were calculated based on the reference system approach, would become the only wet weather TMDLs. The previously established “final” TMDLs, which did not use the reference system approach, would be removed.

Comment 29

B. Resolution paragraph 11, page 4: “....Specifically, it authorizes the San Diego Water Board to develop bacteria TMDLs that allow exceedances of the single sample maximum bacteria WQOs during wet weather for the purpose of accounting for natural, uncontrollable sources of bacteria (e.g., birds, wildlife, soil, etc.). Such sources, by themselves and in the absence of human activities, have been found to cause exceedances of the single sample maximum WQOs during wet weather....”

Response: Finding 11 in Tentative Resolution No. R9-2010-0001 will be revised as suggested by the commenter.

Comment 30

C. Resolution paragraph 12, page 5: “....Additionally, the San Diego Water Board needed to make the revisions that had been committed to upon adoption of the RSAA/NSE Basin Plan amendment, as described in finding 10.”

Response: The suggested revision is appreciated, but current text is accurate.

Comment 31

D. Resolution paragraph 14, page 5: “....Revisions to the original Bacteria TMDLs Project I Basin Plan amendment include: 1) finalizing the TMDLs to include allowable wet-weather exceedances of the REC-1 WQOs using the reference system approach authorized by the RSAA/NSE Basin Plan amendment adopted under Resolution No. R9-2008-0028 (see finding 11)....”

Response: The suggested revisions are appreciated, but current text is accurate.

Comment 32

E. Resolution paragraph 17, page 8: “....Exceedances of bacteria REC-1 WQOs may be allowed within the context of bacteria TMDLs using a reference system approach or natural sources exclusion approach. Re-calculation of the controllable WLAs or LAs and/or re-setting of the exceedance frequency numeric targets is allowable contingent upon the demonstration of

more accurate reference system or natural residual exceedance frequencies for specific target water bodies, conditions or seasons, subject to the approval of the San Diego Water Board.”

Response: The suggested revision is appreciated, but current text is accurate.

Comment 33

F. Resolution paragraph 18, page 8: “...The numeric targets selected for these bacteria TMDLs are based primarily on the REC-1 WQOs for indicator bacteria contained in the Ocean Plan and/or Basin Plan (finding 16), and allowable wet-weather exceedance frequencies using a reference system approach (findings 11 and 17). Different numeric targets (i.e. numeric WQOs and allowable exceedance frequencies) were used to calculate dry weather TMDLs and wet weather TMDLs, respectively. The numeric targets were selected based on the applicability of the Ocean Plan and/or Basin Plan REC-1 WQOs (i.e., Pacific Ocean shoreline or inland surface water) and the allowable exceedance frequencies of the REC-1 WQOs in available reference systems for the different weather conditions (i.e. wet weather or dry weather), based on data available at the time the TMDL process was initiated.”

Response: The suggested revisions are appreciated, but current text is accurate.

Comment 34

G. Resolution paragraph 22, page 10: “...For developing the dry weather TMDLs, a major underlying assumption is was that there is no discharge of surface runoff, thus no discharge of bacteria, expected from land uses associated with the Caltrans, Agriculture and Open Space land use categories during dry weather. Because no discharge of surface runoff is was expected from these land use categories during summer or winter dry weather, they were assigned dry weather WLAs and LAs of zero. The dry weather TMDLs were assigned entirely to the Municipal MS4s land use category as dry weather WLAs, meaning only discharges of bacteria loads from the Municipal MS4s land use category to the receiving waters are expected or allowed from the Municipal MS4s land use category during dry weather. In calculating the WLAs and LAs, the possible contribution of subsurface or groundwater flows to bacteria loads in receiving waters during winter or summer dry weather was not accounted for in any land use category. However, an allowable exceedance frequency of 3% was established specifically for winter dry weather in recognition of conditions at the reference beach, where exceedances were observed during winter dry weather due to creek flows and bacteria loads swollen by antecedent rainfall.”

Response: The suggested revisions are appreciated, but current text is accurate. Also, please see the response in Sections 2.3 and 2.7.1.

Comment 35

H. Resolution paragraph 26, page 11: “...WQBELs may be expressed as numeric effluent limitations, when feasible; other quantifiable metrics, such as as exceedance days in receiving waters; and/or as a best management practice (BMP) program of expanded or better-tailored BMPs. The WQBELs will likely need to include a BMP program to achieve the load reductions required to attain the TMDLs in the receiving waters. Prior to incorporation into the NPDES requirements, the Municipal MS4s and Caltrans will be required to submit Bacteria or Comprehensive Load Reduction Plans outlining a proposed BMP program that will be capable of

achieving the necessary controllable load reductions required to attain the TMDLs in the receiving water. The Municipal MS4s and Caltrans will be responsible for reducing their controllable bacteria loads and/or demonstrating that their discharges are not causing exceedances of the numeric WQOs and beyond the allowable exceedance frequencies in the receiving waters, and/or are not causing elevated risks to human health.”

Response: Please see the response in Section 2.7.2.

In addition, Finding 26 in Tentative Resolution No. R9-2010-0001 will be revised as follows:

26. Implementation of TMDLs: Because the Municipal Phase I MS4s are located at the base of the watersheds and have been identified as a the most significant controllable source of bacteria discharging to the receiving waters, these TMDLs will be implemented primarily through the revision of the National Pollutant Discharge Elimination System (NPDES) discharge requirements regulating discharges from the Municipal Phase I MS4s and Caltrans. The Caltrans NPDES requirements will also be revised. Federal regulations require that NPDES requirements incorporate water quality based effluent limitations (WQBELs) that must be consistent with the requirements and assumptions of any available WLAs. WQBELs may be expressed as numeric effluent limitations, when feasible, and/or as a best management practice (BMP) program of expanded or better-tailored BMPs. The WQBELs will likely need to include a BMP program to achieve the load reductions required to attain the TMDLs in the receiving waters. The Municipal Phase I MS4s and Caltrans will be required to submit Bacteria or Comprehensive Load Reduction Plans outlining a proposed BMP program that will be capable of achieving the necessary load reductions required to attain the TMDLs in the receiving water. The Municipal Phase I MS4s and Caltrans will be responsible for reducing their bacteria loads and/or demonstrating that their discharges are not causing exceedances of the numeric WQOs and allowable exceedance frequencies in the receiving waters. Other dischargers identified as significant sources of bacteria will also be responsible for reducing their bacteria loads and/or demonstrating that their discharges are not causing exceedances of the numeric WQOs and allowable exceedance frequencies in the receiving waters.

Comment 36

I. Resolution paragraph 28, page 12: “...At the end of the dry weather TMDL compliance schedule, the 30-day geometric mean REC-1 WQOs for summer dry weather days must be met 100 percent of the time in the receiving waters; and during winter dry weather days must not be exceeded in the receiving waters more frequently than the allowable exceedance frequencies. At the end of the wet weather TMDL compliance schedule, the single sample maximum and 30-day geometric mean-REC-1 WQOs must not be exceeded in the receiving waters more frequently than the allowable exceedance frequencies.”

Response: The suggested revisions are appreciated, but current text is accurate. Also, please see the responses to Comment 8 and in Sections 2.3 and 2.7.1.

Comment 37

J. Attachment A, paragraph 3, page A6: “...WQBELs may be expressed as numeric effluent limitations, when feasible; other quantifiable metrics such as exceedance days in receiving

waters; and/or as a best management practice (BMP) program of expanded or better-tailored BMPs.”

Response: The suggested revision is appreciated, but current text is accurate.

Comment 38

K. Attachment A, page A11: - Item #4 is missing something at the end of the sentence, probably the location of the TMDL: “4. Total Maximum Daily Loads (TMDLs) for Total Nitrogen and Total Phosphorus in the..>>>?????”

Response: The text will be corrected as follows:

4. Total Maximum Daily Loads (TMDLs) for Total Nitrogen and Total Phosphorus in the Rainbow Creek Watershed

Comment 39

L. Attachment A, page A13, Footnote 2: “Wet weather days defined as days with rainfall events of 0.1” 0.2” or greater and the following 72 hours.”

Response: Please see the response in Section 2.2.

Comment 40

M. Attachment A, page A13, Footnote 3: “Dry weather days defined as days with less than 0.1 0.2 inches of rainfall observed on each of the previous 3 days. Winter dry weather days defined as dry weather days between October 1 and April 30. Summer dry weather days defined as dry weather days between May 1 and September 30.”

Response: Please see the responses in Sections 2.2 and 2.3.

Comment 41

N. Attachment A, page A14, paragraph 2: “...The numeric targets used to calculate summer dry weather TMDLs include a zero percent allowable exceedance frequency of the REC-1 geometric mean WQOs. The numeric targets to calculate winter dry weather TMDLs include a 3 percent allowable exceedance frequency of the REC-1 geometric mean WQOs.”

Response: Please see the response in Section 2.3.

Comment 42

O. Attachment A, page A14, paragraph 3: “...Allowable exceedance days are calculated based on the allowable exceedance frequencies and the total number of wet days or winter dry days in a year.”

Response: Please see the response in Section 2.3.

Comment 43

P. Footnote 4, page A14: “In the calculation of the wet weather TMDLs, the San Diego Regional Board chose to apply the 22 percent allowable exceedance frequency as determined for Leo Carillo Beach in Los Angeles County. At the time the wet weather watershed model was

developed, the 22 percent exceedance frequency from Los Angeles County was the only reference beach exceedance frequency available. No exceedance frequency data were available at reference creeks in wet weather, but the model suggests that creek wet-weather exceedances may be substantially higher than at beaches. The 22 percent allowable exceedance frequency used to calculate the wet weather TMDLs is justified because the San Diego Region watersheds' beaches' exceedance frequencies will likely be close to the value calculated for Leo Carillo Beach, and is consistent with the exceedance frequency that was applied to beaches by the Los Angeles Regional Board.”

Response: Please see the responses to Comment 2 and in Section 2.2.

Comment 44

Q. Footnote 5, page 14: “Limited water quality data available from San Diego Region reference systems beaches when the TMDL project was initiated, indicated that exceedances of the single sample WQOs during dry weather conditions are uncommon at reference beaches. Furthermore, if the exceedance of the single sample WQOs during dry weather is unlikely, are even more unlikely. More recent data developed by SCCWRP in Orange and San Diego Counties indicate that dry-weather exceedances may seasonally be much more common in reference creeks. Depending on the magnitude and consistency of the single-sample exceedances, exceedances of the geometric mean may be more or less common than single-sample exceedances.”

Response: Please see the responses to Comment 2 and in Section 2.3.

Comment 45

Q. Footnote 5, page 14: “Limited water quality data available from San Diego Region reference systems beaches when the TMDL project was initiated, indicated that exceedances of the single sample WQOs during dry weather conditions are uncommon at reference beaches. Furthermore, if the exceedance of the single sample WQOs during dry weather is unlikely, are even more unlikely. More recent data developed by SCCWRP in Orange and San Diego Counties indicate that dry-weather exceedances may seasonally be much more common in reference creeks. Depending on the magnitude and consistency of the single-sample exceedances, exceedances of the geometric mean may be more or less common than single-sample exceedances.”

Response: Please see the response to Comment 2.

Comment 46

R. Attachment A, Page A18, paragraph 3: “... The concentration based TMDLs and allowable exceedance frequencies will be used to determine compliance with the TMDLs in the receiving waters....”

Response: The suggested revision is appreciated, but current text is accurate. The concentration based TMDLs consist of the numeric REC-1 WQOs and the allowable exceedance frequencies.

Comment 47

S. Attachment A, Page 16, footnote (a) to Wet Weather Numeric Targets Table: “(a) Percent of wet days (i.e. rainfall events of 0.1 to 0.2 inches or greater and the following 72 hours)....”

Response: Please see the response in Section 2.2.

Comment 48

T. Attachment A, page A16, Dry Weather Numeric Targets Table:

Dry Weather Numeric Targets

| Indicator Bacteria | Numeric Target (MPN/100 mL) | <u>Summer</u> Allowable Exceedance Frequency | <u>Winter Allowable</u> Exceedance Frequency |
|--------------------|-----------------------------|--|--|
| Fecal coliform | 200 | 0% | <u>3%</u> |
| Total coliform | 1,000 | 0% | <u>3%</u> |
| Enterococci | 35/33 | 0% | <u>3%</u> |

(a). Percent of dry days (i.e., days with less than 0.1 to 0.2 inch of rainfall observed on each of the previous 3 days) allowed to exceed the dry weather numeric targets. Summer is defined as May 1 through September 30 and winter is defined as October 1 through April 30.”

Response: Please see the response in Section 2.3.

Comment 49

U. Attachment A, page A18, paragraph 2: “...the dry weather steady-state model-predicted flows at the critical location during the dry days of the critical wet year in combination with the dry weather numeric targets were used to calculate the mass-based monthly allowable dry weather bacteria loads, or mass-based dry weather TMDLs, for summer dry weather. For the 7 months (October-April) of winter dry weather, the 3% allowable exceedance-day frequency was used to pro-rate the existing excess monthly bacteria load, and added to the summer monthly load based on the numeric targets.”

Response: Please see the response in Section 2.3.

Comment 50

V. Attachment A, page A20, paragraph 2: “...All of the summer dry weather mass-load based TMDLs were calculated using a 0 percent exceedance frequency. All of the winter dry weather mass-load based TMDLs were calculated using a 3 percent exceedance frequency. These allowable exceedance frequencies were used to calculate the number of wet and dry weather allowable exceedance days during the critical wet year.”

Response: Please see the response in Section 2.3.

Comment 51

W. Attachment A, page A23, paragraph 3: “The summer dry weather mass-load based TMDLs were assigned entirely to discharges from MS4 land uses because the runoff that transports bacteria loads to surface waters during dry weather are expected to occur only in urban

areas. The mass load associated with the allowable exceedance frequency of 3% established for winter dry weather is assignable to open space because it represents natural loading from undeveloped reference systems....”

Response: Please see the response in Section 2.3.

Comment 52

X. Page A24, add to end of paragraph 1 (or add new separate paragraphs): “Ultimately, controllable point and nonpoint sources must reduce their anthropogenic loads so the concentration based wet weather and dry weather TMDLs, which are based on the numeric REC-1 WQOs I the Basin Plan and allowable reference exceedance frequencies, can be met during wet weather and dry weather conditions during each year. Meeting the wet weather and dry weather numeric targets in the discharge and/or receiving water will indicate the TMDLs, WLAs, and/or LAs have been met.

After all anthropogenic sources of indicator bacteria have been controlled such that anthropogenic sources do not cause exceedances of the indicator bacteria water quality objectives, exceedances of the indicator bacteria water quality objectives may alternatively be allowed based on the residual exceedances in the target water body. The residual exceedances in the target water body define the background level of exceedance due to natural sources, under the Natural Sources Exclusion approach allowable under the RSAA/NSE Basin Plan amendment adopted under Resolution No. R9-2008-0028. This approach further requires that natural sources be identified and quantified, and dischargers demonstrate that residual indicator bacteria densities are not indicative of elevated human health risk.

The San Diego Water Board will evaluate the appropriateness of the specific approaches and exceedances or exceedance frequencies to be allowed under any proposed recalculation of WLAs or LAs or revisions of numeric targets using either an alternative reference system model or a natural source exclusion model.”

Response: The suggested revisions are appreciated, but current text is accurate.

Comment 53

Y. Attachment A, page A27, revisions to selected columns in Table, Summary of Dry Weather Existing and Allowable Indicator Bacteria Loads: *Note, the correction in the first column heading shown below is typographical. The calculated inputs in the other columns are an example based on the first waterbody in the table (San Joaquin Hills HSA and Laguna Hills HSA); these calculations should be conducted for all waterbodies in the table.*

| Allowable Numeric Objective Load (Billion MPN/ year <u>month</u>) | Total Dry Days in Critical Year | Allowable Exceedance Frequency (<u>Winter 7 months Only</u>) | Allowable Dry Exceedance Days in Critical Year (<u>Winter 7 months Only</u>)* | Allowable Exceedance Load (billion MPN/Month, <u>Winter 7 months only</u>)** | Total allowable load = TMDL (billion MPN/month) (Winter/Summer) |
|---|---------------------------------|--|---|---|---|
| 227 | 296 | <u>3%</u> | <u>4.38</u> | <u>52.4</u> | <u>279/227</u> |
| 1,134 | 296 | <u>3%</u> | <u>4.38</u> | <u>264</u> | <u>1,398/1,134</u> |
| 40 | 296 | <u>3%</u> | <u>4.38</u> | <u>47.6</u> | <u>87.6/40</u> |

* Calculated as 3% x (total dry days in year – 150 summer days).

** Calculated as (existing load – allowable numeric objective load)/30 days x (allowable winter exceedance days/7 months)

Response: Please see the response in Section 2.3. The units in the column with the heading “Allowable Numeric Objective Load” will be corrected to “Billion MPN/mth” on the Table on pages A27-A28 of the draft Basin Plan amendment, and Table 9-3 on pages 83-84 of the draft Technical Report.

Comment 54

Z. Attachment A, page A33, revisions to selected columns in Nonpoint Source/Open Space section of the Table, Dry Weather Fecal Coliform Bacteria Existing Loads, TMDLs, WLA, Las Expressed as Monthly Loads (Billion MPN/month *The calculated inputs are an example based on the first waterbody in the table (San Joaquin Hills HAS and Laguna Hills HSA); these calculations should be conducted for all waterbodies in the table. The data comes from the calculations done above (see comment Y).*

| Existing load (<u>Winter/summer</u>) | Load Allocation (<u>winter/summer</u>) | Reduction Required |
|--|--|--------------------|
| <u>52.4/0</u> | <u>52.4/0</u> | 0% |
| <u>264/0</u> | <u>264/0</u> | 0% |
| <u>47.6/0</u> | <u>47.6/0</u> | 0% |

Response: Please see the response in Section 2.3.

Comment 55

AA. Page A36, bulletpoint #4: “...any discharge to a stormwater conveyance system that is not composed entirely of “storm water”, or exempt categories of non-stormwater, is prohibited unless authorized by the Regional Board....”

Response: The suggested revision is appreciated, but current text is accurate. This bulletpoint is a direct citation from the Basin Plan. See Chapter 4, page 4-20, Waste Discharge Prohibition number (8).

Comment 56

BB. Page A37, bulletpoint #3: “The numeric targets for dry weather TMDLs consist of the REC-1 30-day geometric mean WQOs, with and a 0 percent allowable exceedance frequency for summer dry weather and a 3% allowable exceedance frequency for winter dry weather.”

Response: Please see the response in Section 2.3.

Comment 57

CC. Page A37, bulletpoint #4: “The TMDL calculations are based on either the single sample maximum WQO (for wet weather) or 30-day geometric mean WQOs (for dry weather), but both the single sample maximum and the 30-day geometric mean numeric WQOs must be met in the receiving waters during dry weather.”

Response: This text will be revised in the draft Basin Plan amendment and draft Technical Report as follows:

The TMDL calculations are based on either the single sample maximum WQO (for wet weather) or 30-day geometric mean WQOs (for dry weather), but both the single sample maximum and the 30-day geometric mean numeric WQOs and allowable exceedance frequencies must be met in the receiving waters.

Comment 58

DD. Page A37, add additional bulletpoint under Numeric Targets: “Re-calculation of the TMDLs, WLAs or LAs and/or re-setting of the exceedance frequency numeric targets is allowable contingent upon the demonstration of more accurate reference system or natural residual exceedance frequencies for specific target water bodies, conditions or seasons, subject to the approval of the San Diego Water Board.”

Response: The suggested revision is appreciated, but this is not a requirement or assumption that was used in the calculation of the TMDLs, WLAs, and LAs.

Comment 59

EE. Page A38, Add to the third bulletpoint under Linkage Analysis: “The dry weather existing mass loads and allowable mass loads (i.e.e, dry weather mass-load based TMDLs) are calculated assuming surface runoff is generated only by anthropogenic activities and discharged from specific land use categories to receiving waters. The possible contribution of subsurface or groundwater flows to bacteria loads in receiving waters during dry weather was not accounted for in any land use category.”

Response: The revision will be made as suggested by the commenter.

Comment 60

FF. Page A41, paragraph3, bulletpoint 1: “...WQBELs may be expressed as numeric effluent limitations, when feasible; other quantifiable metrics such as exceedance days in receiving waters; and/or as a BMP program of expanded or better-tailored BMPs.”

Response: The suggested revision is appreciated, but current text is accurate.

Comment 61

GG. Page A42, paragraph 2: "...If, however, the receiving water limitations are not being met in the receiving waters, the Phase I MS4s will be responsible for reducing their bacteria loads and/or demonstrating that controllable anthropogenic discharges from the Phase I MS4s are not causing the exceedances, as outlined below in the monitoring for TMDL Compliance section below."

Response: The revision will be made as suggested by the commenter.

Comment 62

HH. Page A51, and page A52, Tables, Dry Weather Days section of Receiving Water Limitations for Beaches; and page A52, Tables, Dry Weather Days section of Receiving Water Limitations for Beaches: *Change and add selected columns and footnotes:*

| <u>Summer Dry Weather Allowable Exceedance Frequency</u> | <u>Winter Dry Weather Allowable Exceedance Frequency</u> |
|--|--|
| 0% | 3% |
| 0% | 3% |
| 0% | 3% |

- a. Wet weather days defined as days with rainfall events of 0.2-0.1 inches or greater and the following 72 hours.
- b. Dry weather days defined as days with less than 0.2-0.1 inches of rainfall observed on each of the previous 3 days.

Response: Please see the response in Section 2.3.

Comment 63

II. Page A52, paragraph 2: "... (i.e., the running geomean on dry weather days in a 30-day period shall not exceed the 30-day geometric mean REC-1 WQOs more than 0 percent of the time in summer dry weather, or 3 percent of the time in winter dry weather."

Response: Please see the response in Section 2.3.

Comment 64

JJ. Page A53, paragraph 1: "...If at the end of the dry weather TMDL compliance schedule the receiving waters exceed the 30-day geometric mean REC-1 WQOs more than 0 percent of the time in summer or 3% of the time in winter, the municipal MS4s are responsible for...."

Response: Please see the response in Section 2.3.

Comment 65

KK. Page A53, paragraph 3, compliance with Wet Weather TMDLs: "At the end of the wet weather TMDL compliance schedule, the bacteria densities in the receiving waters for all wet weather days cannot exceed the single sample maximum REC-1 WQOs more than the allowable exceedance frequency. In addition, the bacteria densities must be less than or equal to the 30 day geometric mean REC-1 WQOs 100 percent of the time (i.e, both dry and wet weather days in a

~~30-day period shall not exceed the 30-day geometric mean REC-1 WQOs more than 0 percent of the time.”~~

Response: Please see the response in Section 2.7.

Comment 66

LL. Page A53, paragraph 4: “As described in the minimum monitoring components above, at least one sample should be collected within 24 hours of the end of a storm event that occurs during the rainy season (i.e., October 1 through April 30). Dischargers are expected to propose a wet weather compliance sampling and interpretation protocol in their Bacteria Load Reduction Plans, for approval by the San Diego Water Board. If an alternative protocol is not submitted or approved, the following shall govern: If only one sample is collected for a storm event, the bacteria density for every wet weather day associated with that storm event shall be equal to the results from that one sample. If more than one sample is collected for a storm event, but not on a daily basis, the bacteria density for all the wet weather days not sampled shall be equal to the highest bacteria density result reported from samples collected....”

Response: The paragraph referenced by the commenter describes the minimum monitoring requirements that should be included in any monitoring plan that is developed. The paragraph will be revised in the draft Basin Plan amendment and draft Technical Report as follows:

As described in the minimum monitoring components above, ~~at least one sample~~ wet weather samples should be collected within 24 hours of the end of a storm event that occurs during the rainy season (i.e., October 1 through April 30). At least one wet weather sample per storm is expected to be collected for each waterbody in each watershed (i.e., Pacific Ocean shoreline, creek mouth, and/or creek). Because of the many issues related to collecting wet weather samples from multiple sites within a short time frame, dischargers are expected to develop a wet weather monitoring and sampling approach in their BLRPs or CLRPs. If only one sample is collected for a storm event, the bacteria density for every wet weather day associated with that storm event shall be equal to the results from that one sample. If more than one sample is collected for a storm event, but not on a daily basis, the bacteria density for all the wet weather days not sampled shall be equal to the highest bacteria density result reported from samples collected. The exceedance frequency shall be calculated by dividing the number of wet weather days that exceed the single sample maximum REC-1 WQOs by the total number of wet weather days during the rainy season. If at the end of the wet weather TMDL Compliance Schedule the receiving waters exceed the single sample maximum REC-1 WQOs more than the allowable exceedance frequency, all controllable sources are responsible for demonstrating their discharges into the receiving waters are not causing the exceedances, or they will be considered out of compliance.

Comment 67

MM. Page A53, Footnote: “Defined as days with a storm with at least ~~0.2~~ 0.1 inches of rainfall and the 72 hour period after the storm event.”

Response: Please see the response in Section 2.2.

Comment 68

NN. Page A54, paragraph 2: ~~“The data collected for compliance with the dry weather TMDLs, described above, shall be used in addition to the data collected for wet weather with the wet weather TMDLs to calculate the wet weather 30-day geometric mean. If at the end of the wet weather TMDL Compliance Schedule the receiving waters exceed the 30-day geometric mean REC-1 WQOs at any time, all controllable sources are responsible for demonstrating their discharges into the receiving waters are not causing the exceedances, or they will be considered out of compliance.”~~

Response: Please see the response in Section 2.7.1.

Comment 69

OO. Page A55, next to last paragraph: “Between the effective date of these TMDLs and the end of the TMDL Compliance Schedules, monitoring is also required to demonstrate progress toward achieving and complying with the TMDLs, WLAs, and LAs. Progress can be demonstrated by timely implementation of BMPs identified in the Bacteria Load Reduction Plans, and/or with reductions in exceedance frequencies in the receiving waters until the allowable exceedance frequencies ultimately are achieved at the end of the TMDL Compliance Schedules. Demonstrating progress toward attaining the TMDLs in the receiving waters will be assessed differently for dry weather and wet weather, as proposed and approved in the Bacteria Load Reduction and Monitoring Plans, or as follows if an alternative proposal is not approved:...”

Response: The suggested revisions are appreciated, but current text is accurate. Just implementing of BMPs will no longer be sufficient to demonstrate compliance. It must be demonstrated that the BMPs that are implemented are, in fact, effective at restoring water quality in the receiving waters. For this reason, progress toward compliance with the TMDLs will be demonstrated by measureable reductions in exceedance frequencies in the receiving waters.

Comment 70

PP. Page A56, Table: Insert into Title of Table: “Modeled Estimate of Critical Year Existing Wet Weather Exceedance Frequencies by Watershed.”

Response: The revisions will be made as suggested by the commenter.

Comment 71

QQ. Page A56, last paragraph: “...Because the REC-1 WQOS must be met (subject to allowable exceedance frequencies) throughout the 20 waterbodies addressed by these bacteria TMDLs, monitoring data from these locations and any other beach segments and/or creek monitoring points in the watersheds addressed by these TMDLs may be used to determine compliance.”

Response: The sentence will be revised as follows:

Because the REC-1 WQOs and allowable exceedance frequencies must be met throughout the 20 waterbodies addressed by these bacteria TMDLs, monitoring data from these locations

and any other beach segments and/or creek monitoring points in the watersheds addressed by these TMDLs may be used to determine compliance.

Comment 72

RR. Page A66, second paragraph: “Full implementation of the TMDLs for indicator bacteria shall be completed as soon as possible, but no later than 10 years from the effective date for both the dry weather and wet weather TMDLs, unless an alternative compliance schedule is approved in conjunction with a Comprehensive Load Reduction Plan, as described below...”

Response: The sentence will be revised as follows:

Full implementation of the TMDLs for indicator bacteria shall be completed as soon as possible, but no later than 10 years from the effective date for both the dry weather and wet weather TMDLs, unless an alternative compliance schedule as part of a Comprehensive Load Reduction Plan (CLRP) is approved, as described in the following section.

4.8 *City of Oceanside*

Comment 73

Definition of a rain event: Data from a study at Leo Carrillo Beach (a largely undeveloped "reference" watershed in Los Angeles County) are used to establish a frequency at which beaches and creeks covered by this TMDL are allowed to exceed bacteria water quality objectives during wet weather (220/0). Allowable exceedance frequencies are appropriate in TMDLs because numerous studies have found that even reference watersheds that are not impacted by anthropogenic activities sometimes exceed water quality objectives. Exceedance frequencies at Leo Carrillo Beach were calculated based on wet weather days defined as rainfall events of at least "0.1 inch and the following 72 hours" (Resolution No. 2002002). This TMDL defines wet weather days as "rainfall events of 0.2 inches or greater and the following 72 hours." It is scientifically invalid to apply the wet weather exceedance frequency observed at Leo Carrillo Beach to a TMDL that uses a different definition of wet weather days. The exceedance frequency for rainfall events greater than 0.2 inches is very likely to be different than 22%. Wet weather days in this TMDL should be defined as "any rain event 0.1 inch or greater and the following 72 hours". This will ensure consistency with the Leo Carrillo Beach reference study.

Response: Please see the response in Section 2.2.

Comment 74

Application of Total Coliform Water Quality Objectives to Creeks: Footnote C to the tables on Page A16 and footnote F to the table on Page A52 of the proposed Basin Plan Amendment (strikeout/underline version) state that wet and dry weather numeric objectives for total coliform apply at the point in a creek that discharges to a beach, bay, or estuary. The Basin Plan does not contain total coliform water quality objectives applicable to inland surface waters. Language throughout the Resolution, Basin Plan amendment, and Technical Report should be reviewed and changed to correctly state that total coliform water quality objectives are not applicable in inland surface waters, only at the point in creeks where continual mixing with salt water occurs.

Response: Please see the response to Comment 17.

Comment 75

Applicability of TMDL requirements to non-impaired waters and the extension of responsibility to discharges not located within an impaired hydrologic area: Page A1 of the proposed Basin Plan amendment states: "The TMDLs that have been developed for the Pacific Ocean shorelines are assumed to be applicable to all the beaches located on the shorelines of the hydrologic subareas (HSAs), hydrologic areas (HAs), and hydrologic units (HUs) listed [in a table] above." This statement implies, for example, that all dischargers located anywhere in the San Marcos HA (904.5) will be required to comply with the Revised Bacteria TMDL. In fact, Moonlight Beach is the only segment within the San Marcos HA that is identified as impaired on the 303(d) list. Moonlight Beach, although technically within the boundaries of the San Marcos HA, is hydrologically disconnected from the rest of the HA. The draft Technical Report recognizes this fact in Table 3-1 where Moonlight Beach is shown to have a total drainage area of only 1.43 square miles. The table on Page A61 goes one step further by listing all eight Phase

I MS4s in the Carlsbad HU, including the City of Oceanside, as "responsible municipalities" required to comply with TMDL requirements in the San Marcos HA, although the City of Oceanside has no discharges to, nor jurisdiction in, the San Marcos HA. The table implies that any Phase I MS4 located anywhere in the Carlsbad HU will be required to comply with TMDL requirements to address impairments at Moonlight Beach. In fact, only the City of Encinitas discharges to the Moonlight Beach Watershed. When asked at the January 7, 2010, SAG meeting, Regional Board staff indicated that the footnote was worded as intended and that the inclusion of all eight Phase I MS4s within the Carlsbad HU was intentional. The implications of this decision are far reaching. In the San Marcos HA example, seven municipalities would be required to monitor for compliance, and develop and implement load reduction plans, to address bacteria impairments at beaches that are not currently identified as impaired on the 303(d) list. This would constitute a gross misuse of resources when there are so many other impairments requiring attention in the region. To correct this problem in the San Marcos HA example, only the City of Encinitas should be assigned a WLA in the TMDL and only Encinitas should be assigned responsibility for the load reductions required in the TMDL, unless an impairment is determined for the remaining water bodies that can be linked to discharges from other municipalities.

Response: The TMDLs developed for the San Marcos HA will be applicable to any beach located within the Pacific Ocean shoreline of that particular HA watershed. In the future, if there are additional beach segments that are added to the 303(d) List, the provisions of these TMDLs would be applicable. As such, all the municipalities located within the San Marcos HA will be responsible to reduce their loads that they contribute that are causing the impairment. If there are municipalities that are not contributing loads that are causing the impairment, the BLRPs or CLRPs should identify those specific municipalities that are responsible and the actions that will be taken by those specific municipalities.

We did, however, reviewed of the municipalities located within the San Marcos HA. The City of Oceanside, the City of Solana Beach, and the City of Vista will be removed from the list of Responsible Municipalities on pages A61 of the draft Basin Plan amendment, and page 130 of the draft Technical Report (clean version), as they are not located within the San Marcos HA. Also, please see the response in Section 2.1.

Comment 76

Combining dry and wet data to calculate a wet weather geometric mean: The proposed Basin Plan amendment (Page A54 of the strikeout/underline version) states that wet weather and dry weather samples will be used together to calculate the wet weather 30-day geometric mean and that no exceedances of the wet weather 30-day geometric mean are allowed. This methodology is not scientifically defensible. The 30-day geometric mean should not be applied to wet weather samples but only to the dry weather condition. Moreover, wet weather and dry weather samples should not be combined to calculate the 30-day geometric mean.

Response: Please see the response in Section 2.7.

Comment 77

No allowable exceedance frequency during dry weather: This TMDL allows no exceedances of bacteria water quality objectives during dry weather days (defined as "days with less than 0.2

inch of rainfall observed on each of the previous 3 days"). However, in other TMDLs where Leo Carrillo Beach is used as a reference system (i.e., Santa Monica Bay Beaches Bacteria TMDL), the dry weather TMDL is split into two seasons: summer dry (0% allowable exceedance frequency) and winter dry (3% allowable exceedance frequency). This is an important distinction because during the winter months, the Leo Carrillo Beach reference system exhibited some exceedances during dry weather days. This TMDL should allow a 3% exceedance frequency during dry weather until a more appropriate frequency can be established based on data collected from a reference system in the San Diego region.

Response: Please see the responses to Comment 2 and in Section 2.3.

Comment 78

Basin Plan amendments: Chapter 7 Section (f)(6) of the proposed Basin Plan amendment (page A49 of the strikeout/underline version) recognizes that revisions to the Basin Plan may be necessary in the future. It also specifies conditions that must be met before the Regional Board will initiate a Basin Plan amendment project. Because this TMDL is founded on several critical assumptions and uncertainties, and because several studies with bearing on these assumptions are either planned, ongoing, or completed, stronger language should be included in the Basin Plan amendment that includes a more specific commitment to and timeline for revising the TMDL.

A paragraph should be added at the end of Chapter 7 Section (f)(7) of the proposed Basin Plan amendment (page A50 of the strikeout/underline version) that states: "Any study conducted following the procedures outlined in this paragraph will be considered by the San Diego Regional Water Quality Control Board during the time period specified in Table (Insert Table Number) TMDL Implementation Milestones". Also, on page A69 in the strikeout/underline version, a row should be added to the TMDL Implementation Milestones Table as follows:

| Item | Implementation Action | Responsible Parties | Date |
|------|--|-----------------------|---|
| 6 | San Diego Water Board will reconsider the TMDL to include results of any optional special studies and water quality monitoring data completed by the responsible entities and revise numeric targets. WLAs. LAs and the implementation schedule as needed. | San Diego Water Board | The later of: (1) within 5 years of effective date or (2) within 1 year of receipt of final study results |

Response: Please see the response in Section 2.6.

Comment 79

Monitoring for TMDL Compliance and Compliance Assessment: Pages A50 and A51 of the Basin Plan Amendment (strikeout/underline version) describe monitoring requirements, including minimum number of stations and minimum sampling frequencies during wet and dry weather. Page A50 also states: "If exceedances of the receiving water limitations are observed in the monitoring data, additional monitoring locations must be added to identify the sources causing the exceedances. . . ." Page A54 states: "Because the Phase I MS4s are located at the base of the watersheds and have been identified as the most significant controllable source of

bacteria., the municipal Phase I MS4s will have the primary [responsibility] for monitoring the receiving waters The municipal MS4s may demonstrate that their discharges are not causing the exceedances in the receiving waters by providing data from their discharge points to the receiving waters, by providing data collected at jurisdictional boundaries, and/or by using other methods accepted by the San Diego Water Board. Otherwise, at the end of the wet weather TMDL compliance schedule, the municipal Phase I MS4s will be held responsible and considered out of compliance unless other information or evidence indicates another controllable or uncontrollable source is responsible for the exceedances in the receiving waters." The entire monitoring burden under this draft TMDL has been placed on Phase I MS4 dischargers, including monitoring to identify non-Phase I MS4 point and non-point dischargers that have been assigned wasteload allocations (WLAs) and load allocations (LAs) under this TMDL. At a minimum, all dischargers assigned WLAs and LAs under this TMDL should be required to participate in the source identification monitoring if exceedances of receiving water limitations are observed.

Response: Please see the response in Section 2.7.1.

The Phase I MS4 dischargers are the primary and largest controllable source of bacteria in the watersheds included in these TMDLs. They are also located at the base of the watersheds. Monitoring that is already required under the Phase I MS4 NPDES requirements and for AB411 beach water quality monitoring is expected to be the primary and most significant sources of data to determine whether water quality objectives and allowable exceedance frequencies are being met in the receiving waters. We do, however, recognize that there are other controllable sources that are upstream that should monitor. The paragraph referenced by the commenter will be as follows:

Because the Phase I MS4s are located at the base of the watersheds and have been identified as the most significant controllable source of bacteria, the municipal Phase I MS4s will have the primary responsible for monitoring the receiving waters. Caltrans will also have monitoring responsibilities. Phase II MS4s, agricultural dischargers, and other sources that are identified as significant sources (i.e., causing or contributing to exceedances in the receiving waters) will also be responsible for monitoring the receiving waters. The municipal Phase I MS4s and other dischargers are responsible for reducing their bacteria loads and/or demonstrating their discharges into the receiving waters are not causing the exceedances.

Comment 80

TMDL Compliance Timelines: When the Regional Board originally adopted this TMDL in December 2007, the compliance timeline for achieving wet weather TMDLs was 20 years. In the currently proposed revised TMDL, the compliance timeline has been cut in half to 10 years for all water bodies except Chollas Creek. The TMDL and Tentative Resolution state that if dischargers submit a Comprehensive Load Reduction Plan (CLRP) addressing multiple constituents in addition to bacteria, the compliance timeline may be extended to 20 years for achievement of wet weather TMDLs only. There is no allowance for a timeline longer than 10 years for achieving the dry weather TMDLs. It is unclear why the compliance timeline for wet weather has been shortened to 10 years for most water bodies. Given the scale, complexity, and cost of the structural and nonstructural solutions that will be needed to reduce bacteria loads to

the required levels, 20 years is an aggressive timeline to expect compliance with either wet or dry weather TMDLs. The TMDL should be revised to allow for a 20-year compliance timeline for achievement of both wet and dry weather TMDLs.

Response: The timelines for the compliance schedules are the same as those in the original Basin Plan amendment adopted in December 2007. Please see the tables on pages 181-182 of the underline/strikeout version of the draft Technical Report. These tables have the same compliance schedules and interim milestones that are in the current draft Basin Plan amendment. No change in the compliance schedules has been made.

Comment 81

Assumption that all dry weather flows are anthropogenic. The assumption that all dry weather flows are due to anthropogenic influence is invalid. Those stream systems influenced by natural groundwater seepage are more likely to flow regardless of anthropogenic influence. Studies by the Southern California Coastal Water Research Project (SCCWRP) have shown that reference systems, including San Mateo Creek in San Diego County, contain natural flows during the dry season (Tiefenthaler, L., E. Stein and G. Lyon. 2008. Fecal indicator bacteria levels during dry weather from Southern California reference streams. SCCWRP Annual Report, Costa Mesa, CA). Technical Report Sections 6, 8,9, and 11 should provide updated text regarding this assumption.

Response: Please see the response in Section 2.4.

4.9 City of San Diego

Comment 82

Inclusion of Draft 2008 Regional Board §303(d) De-Listed Waterbodies in TMDL

The Bacteria Project I TMDL Revised Technical Report includes waterbody/pollutant combinations recommended for de-listing on the draft 2008 Regional Board §303(d) list. In accordance with the Clean Water Act (CWA), the State Board §303(d) listing process is used to prioritize waterbodies not currently subject to effluent limitations and is to be based on scientific data that indicate impairment. This prioritization process allows for focused use of limited resources to address impairments through TMDL implementation by the municipalities, and other agencies, including the City.

The inclusion of de-listed indicator bacteria and waterbodies in the TMDL is counter to this prioritization process and cost-effective use of our City's resources. It is understood that the timing of the draft Bacteria Technical Report did not coincide with the approval of the most recent draft 2008 Regional Board §303(d) listings. To be consistent with the prioritization process, it is recommended the proposed de-listed indicator bacteria waterbodies be removed from this TMDL.

Response: Please see the response in Section 2.1.

Comment 83

Inconsistent Use of Reference Condition

Wet Weather Basis: The TMDL states that the reference condition from the Leo Carrillo Beach Reference Study (Leo Carrillo) is applied to estimate the allowable exceedance frequency at beaches and creeks in the TMDL. However, the exceedance frequency at Leo Carrillo is based on a rain event of 0.1 inches and the following 72 hours," as stated in Resolution No. 2002-002. This TMDL is using the Leo Carrillo reference study results while redefining wet days as "0.2 inch of rain and the following 72 hours." It is scientifically invalid to use a reference condition for a different storm size, because the exceedance frequency for storm events of 0.2 inch or greater and 72 hours later is not known. To be consistent with the reference system study, it is recommended that a storm event or wet day be defined as any instance of a rain event 0.1 inch or greater and the following 72 hours.

Dry Weather Basis: The Leo Carrillo reference study was also used to establish the dry weather exceedance frequency limits in the Los Angeles area bacteria TMDLs, as stated in Resolution No. 2002-004. However, the draft technical report Section 4.2.1 states that "little data are available regarding exceedances of Water Quality Objectives (WQOs) in a reference system the reference system approach may be an option that would allow an exceedance frequency to be included with the dry weather numeric targets in the dry weather TMDLs." It is unclear why a reference system approach is appropriate for wet weather, but not for dry weather. It is recommended that the reference condition for dry weather at Leo Carrillo beach be used in this TMDL. Additionally, a TMDL reopener needs to be included that allows for the incorporation of any future data. It is essential that this process be documented in the TMDL.

In the TMDL, the dry weather exceedance frequency limits are set at zero. However, in the Los Angeles area, TMDLs where the Leo Carrillo system was used as a dry weather reference, the dry weather TMDL is split into summer dry and winter dry seasons. This is an important distinction because during the winter months, the reference system exhibited exceedance days. It is recommended that the TMDL separate dry period into summer and winter seasons instead of setting the dry weather exceedance frequency limit to zero during all dry periods. This is necessary because rains cause the ground water to increase the water table and infiltrate to the streams. The allowable exceedance frequency at Leo Carrillo is 3% during winter dry weather, and that standard should also apply in San Diego County. The summer dry weather exceedance frequency limit would remain zero using the Leo Carrillo reference study.

In addition, this TMDL defines the exceedance frequency for the wet weather condition, but not the number of allowable exceedance days based on the critical year. Instead, an allowable exceedance frequency is set. The use of the 1993, 90th percentile critical storm year to set the exceedance frequency incorporates critical conditions, but does not define the waste load allocations based on those critical conditions. It is recommended that the Regional Board use the reference condition exceedance frequency and the number of wet days in the critical year at each location within the TMDL to define a set allowance of exceedance days for each year.

Response: Please see the responses in Sections 2.2, 2.3 and 2.6 for responses to the first three paragraphs of this comment. The statements in the final paragraph are inaccurate. The 90th percentile storm year was not used to set the *allowable* exceedance frequency, but was used to set the model estimated “*existing*” exceedance frequency. The “*existing*” exceedance frequency is the “worst case” exceedance frequency and needs to be reduced to match the *allowable* exceedance frequency.

The San Diego Water Board has decided to use an allowable exceedance *frequency* rather than allowable exceedances *days*. The allowable exceedance days approach sets a fixed number of days for each year, regardless of the amount of rainfall each year. If we were to set the allowable exceedance days based on the critical wet year, it is quite possible that during very dry years, every wet day (i.e., 100%) could be in exceedance of the REC-1 WQOs and still be less than or equal to the number of allowable exceedance days. Likewise, if there is an extremely wet year that has significantly more wet days than the critical wet year, meeting the number of allowable exceedance days may be impossible to achieve.

The allowable exceedance frequency approach is adaptable for very dry to very wet years. Each year will have a different number of wet days, but the allowable exceedance frequency will not change. Therefore, each year will have a different number of wet weather allowable exceedance days. Also, please see the response to Comment 26.

Comment 84

TMDL Reopener Process Clarification

The TMDL, Section 4.1.3, states "watershed specific exceedance frequencies are determined for any of the watersheds addressed in the TMDL, the wet weather TMDLs can be recalculated based on these watershed specific exceedance frequencies." The specific process for amending the TMDL, as well as TMDL reopener schedule, should be incorporated into the TMDL. The

City recommends that the following language used in the Santa Monica Bay Beaches TMDL, Resolution 2002-022 be included in this Tentative Resolution:

- Four years after the effective date of the TMDL, the Regional Board shall reconsider the TMDL.
- The four areas of consideration when reconsidering the TMDL shall include:
 - o Refine allowable wet weather exceedance days based on additional data on bacterial indicator densities in the wave wash and an evaluation of site-specific variability in exceedance levels)
 - o Re-evaluate the reference system selected to set allowable exceedance levels, including a reconsideration of whether the allowable number of exceedance days should be adjusted annually dependent on the rainfall conditions and an evaluation of natural variability in exceedance levels in the reference system(s),
 - o Re-evaluate the reference year used in the calculation of allowable exceedance days, and
 - o Re-evaluate whether there is a need for further clarification or revision of the geometric mean implementation provision.

Response: Please see the response in Section 2.6.

Comment 85

Compliance Points and Monitoring Program/or Wet Weather

Match Compliance to Risk and Safety: To meet the beneficial use goals and use the City's resources cost-effectively, compliance to the TMDL needs to focus on river areas where the recreational benefit is consistent with the actual and potential use. The City is committed to this goal and through its ongoing bacteria reduction and public outreach efforts has been able to reduce beach postings by 76% since 2001. However, certain concrete-lined flood channel sections of creeks and streams are not subject to recreational use particularly during wet weather; yet they are still designated as REC-1 waterbodies. These sections should not be part of the wet weather compliance monitoring program as public safety prohibits access during storm events.

Response: Similar concerns were raised during the adoption of Bacteria TMDLs Project I before it was adopted in December 2007 (see comments 11, 123, 131, and 144 in Appendix S to the draft Technical Report). The REC-1 designation applies to the entire waterbody in the Basin Plan unless otherwise noted. If there is evidence to de-designate the beneficial use, a separate Basin Plan amendment will be required.

If it becomes a priority and the resources become available, the San Diego Water Board may consider creating subcategories of beneficial uses in order to refine their applicability. Dischargers can propose such beneficial use refinements for consideration by the Board. Regarding safety considerations during monitoring, the City will need to assess it on a case-by-case basis.

Comment 86

Compliance Monitoring Directed at Human Sources: To use the City's funds cost-effectively, compliance monitoring during wet weather events should focus on follow-up source tracking of human sources.

Response: The BLRPs or CLRPs that are developed should provide a framework of the actions that will be taken to reduce bacteria loads. Monitoring and source identification are essential elements that need to be included in the BLRPs or CLRPs. While sources that can be traced specifically to humans may be helpful, other anthropogenic sources may not be human in origin (e.g., domestic pets). Furthermore, the health risk associated with bacteria from non-human sources is not well understood at this time. Special studies and monitoring that is above and beyond the minimum monitoring requirements can certainly be included in the BLRPs or CLRPs, and would be supported by the San Diego Water Board.

Comment 87

Compliance Based on Sound Science: Preliminary data presented in the Tecolote Creek Microbial Source Tracking Study suggested that storm water is characterized by higher concentrations of fecal indicator bacteria during the first flush. There is an increasing predominance of enterococcus bacteria associated with plant matter and re-growth later in the storm, which are not known to cause human illness. Compliance measures must be focused on sound science so that Best Management Practices (BMPs) are designed in a cost-effective manner.

Response: The studies undertaken by the City of San Diego are the kinds of studies that the San Diego Water Board encourages and would like to see continued. Data from these types of studies may be used to develop region or watershed specific allowable exceedance frequencies, or a waterbody specific natural sources exclusion. Identifying natural uncontrollable sources may be just as important as identifying anthropogenic and controllable sources so BMP implementation can be properly focused.

Comment 88

Human versus Anthropogenic: Compliance should be measured by addressing human sources of bacteria detected above water quality objectives in wet weather flows at appropriate compliance points. If the purpose of the TMDL is to restore the REC-I beneficial use so the public can swim, use of the United States Environmental Protection Agency (EPA) bathing standards have been and continue to be followed. This is because the REC-I bathing standards are based on epidemiologic studies to protect human health from risk of illness from human sewage sources. Monitoring should focus on human sources rather than a broad category of anthropogenic sources, which may not be associated with an unacceptable human health risk. Without focusing monitoring efforts on human sources, extensive public resources would be used to track sources of little or no risk to the public. It is recommended that a tracking program using Quantitative Polymerase Chain Reaction (QPCR) techniques be implemented.

Response: Please see the responses to Comments 85, 86, and 87.

Comment 89

The assumption in the TMDL that all dry weather exceedances may be attributed to the municipal separate storm sewer system (MS4) is invalid. This assumption was demonstrated as incorrect in the Mission Bay (2004) and San Diego River (2006) Bacteria Source Identification Studies, which were conducted for the State Board Proposition 13 Clean Beaches Initiative grants, and the Pacific Beach Point Bacteria Source Identification Study (2006) in coordination

with San Diego Coastkeeper. The results of these studies showed that birds and other wildlife are the source of indicator bacteria exceedances during dry weather at beaches. Holding the City and other MS4 dischargers accountable for indicator bacteria exceedances caused by natural sources that were demonstrated in the middle of this TMDL process is inappropriate.

All dry weather flows are not due to anthropogenic influences. Many of the streams in Southern California flow naturally during the dry season. Southern California Coastal Water Research Project (SCCWRP) studies have shown that reference systems have natural flows during the dry season, including San Mateo Creek in San Diego County. Additionally, during winter dry conditions, nearly all streams in San Diego County exhibit flow due to storm events that raise the groundwater table causing infiltration into the creek beds.

Response: Please see the responses to Comments 2 and 59, and in Section 2.4. We acknowledge that birds and other wildlife may cause dry weather exceedances, but in many situations there is a strong anthropogenic component associated with these sources. For example, birds (squirrels, etc) congregate where humans feed them or have left food. In many locations, the presence of humans and their food attract birds and wildlife in large numbers. Furthermore, the health risk associated with bacteria from non-human sources is not well understood at this time.

Comment 90

Stated Use of the Dry Weather Geometric Mean is Scientifically Invalid: Attachment A of the Tentative Resolution (page AS4) states that the wet weather and dry weather samples will be used together to calculate the wet weather 30-day geometric mean and that no exceedances of the wet weather, 30-day geometric mean are allowed. The allowable exceedance of single sample criteria is zero during dry weather periods, but there is a frequency allowance for wet weather samples. Using the two sets of samples together will most likely result in an exceedance of the 30-day geometric mean, and no exceedances of the geometric mean are allowed. This methodology of contributing the two data sets is not scientifically defensible. It is recommended that the 30-day geometric mean only be applied to dry weather samples.

The use of the 30-day wet weather geometric mean is not clear. Page A66 of the Tentative Resolution Compliance Schedule states that, "at the end of the wet weather TMDL compliance schedule, the receiving waters must not exceed the single sample maximum REC-I WQOs more than the wet weather allowable exceedance frequency." However, the Tentative Resolution page 12, item 28, states, "at the end of the wet weather TMDL compliance schedule, the single sample maximum and 30-day geometric mean REC-I WQOs must not be exceeded in the receiving water more frequently than the allowable exceedance frequencies." Because there is an allowable exceedance frequency for wet weather single sample compliance, but none for the 3D-day geometric mean, it is not clear how the 3D-day geometric mean will be used to assess compliance. Any allowable wet weather exceedance day concentration would be included in the 3D-day geometric mean, likely resulting in an exceedance of the 3D-day geometric mean. Please clarify the use of the wet weather 30-day geometric mean, its definition, purpose, whether or not it will be used as a measure of compliance, and if so, how will it be used.

Response: Please see the response in Section 2.7.

Comment 91

Compliance Points and Monitoring Program/or Dry Weather

Compliance Monitoring Needs to Account for Diversions: The City has invested in a dry weather diversion at the base of the Tecolote Watershed to protect the recreational use of Mission Bay. With no dry weather flows entering Mission Bay from Tecolote Creek, compliance to protect the beneficial use of the waterbody should be directed at monitoring the effectiveness of the diversions rather than any periodic flows in the flood control channel.

Response: Please see the responses to Comments 85 and 86. While the diversion may protect the waters of Mission Bay from the discharge of Tecolote Creek, the water quality standards must also be met in Tecolote Creek. The TMDLs were developed specifically for Tecolote Creek, not Mission Bay.

Comment 92

Concentration-Based TMDL -Load Reductions should be allowed to Show Progress toward TMDL Compliance

Best Management Practices and Reducing Dry Weather Concentration: The TMDL applies a concentration-based compliance goal, however many BMPs, including low impact development (LID) and irrigation controls, can effectively reduce loads but not concentration (City of Laguna). The compliance goals of the TMDL state that progress toward TMDL implementation will be based on exceedance frequency reduction. While important, it is also important to include mechanisms to show progress toward TMDL compliance using load reductions.

BMPs and Reducing Wet Weather Concentrations: LID BMPs may be used to reduce runoff volume during storm events, but this will not likely result in decreased concentrations of bacteria. LID can be part of an integrated suite of BMPs to reduce the volume of runoff and pollutant loading including bacteria, but if compliance is focused on concentration, this may discourage the innovative use of these and other more sustainable approaches. If the TMDL allows load reduction goals to show progress toward TMDL compliance, then these approaches would be more widely implemented to address bacteria and the variety of BMPs that may be used.

Response: The goal of any TMDL is to restore the beneficial uses of an impaired waterbody. This means that the water quality objectives that support those beneficial uses must be met in the receiving waters. If the water quality objectives are not being met in the receiving waters, the impairment has not been corrected.

The mass-load based WLAs and LAs were used primarily to identify the controllable sources with bacteria loads that required reductions. If the receiving water limitations (i.e., water quality objectives measured in concentration and allowable exceedance frequencies) are met in the receiving waters, the assumption is that the WLAs and LAs for controllable sources are being met. If, however, the receiving water limitations are not being met, the known controllable sources must demonstrate that they are not causing or contributing to the exceedances. If the controllable sources demonstrate they are not causing or contributing to the exceedances, then they have met their WLA or LA.

The most straightforward way a controllable discharge can demonstrate they are not causing or contributing to the exceedances is if there is no discharge, or if the bacteria density (or concentration) if their discharge is at or below the receiving water limitations (i.e., water quality objectives and allowable exceedance frequency). Monitoring at key jurisdictional boundaries may also provide evidence that upstream sources are the cause of the exceedances. If all controllable sources can demonstrate they are not causing or contributing to the exceedances of the receiving water limitations, then the application of the natural sources exclusion approach and revision of the TMDLs may be warranted.

Also, please see the response to Comment 9.

Comment 93

Compliance Timeline (Integrated Approach): The compliance schedule was 20 years in the previous version of the TMDL, and has now been reduced to ten years for all waterbodies, excepting Chollas Creek. It is stated in the TMDL and Tentative Resolution that if dischargers submit a Comprehensive Load Reduction Plan (CLRP), they may set the compliance schedule greater than ten years for wet weather but must meet dry weather compliance goals within ten years. It is recommended that the compliance schedule be returned to 20 years for both wet and dry compliance, since bacteria is one of the most complicated pollutants to regulate.

Response: Please see the response to Comment 80.

Comment 94

Inclusion of Tecolote Watershed in TMDL –Request for Inclusion of Data/or Sound Science Basis

Initially the Regional Board did not include Tecolote Creek in this TMDL. Therefore, the City initiated the Tecolote Creek Bacteria Characterization and Source Identification Project in order to assist the Regional Board with the development of a creek specific TMDL. Currently, the City is performing Phase III to assess bacteria storm drain system regrowth and bacterial speciation. The City has insisted on providing project updates to the Regional Board staff. Unfortunately this independent TMDL project was incorporated into this TMDL, effectively nullifying the good faith efforts we have put forth. We are requesting that Tecolote Creek be removed from this TMDL. It is recommended that a TMDL re-opener process for inclusion of new data be defined and a schedule be set to allow for future updates to the TMDL.

The application of outdated land use data has been identified as a potential issue during the review of previous TMDL versions. It is apparent that the land use data was not updated and as new information becomes available, it should be incorporated into the TMDL. Setting a firm reopener schedule would allow dischargers to update information and improve the TMDLs.

Response: The San Diego Water Board appreciates the studies undertaken by the City of San Diego. The studies undertaken by the City of San Diego are the kinds of studies that the San Diego Water Board encourages and would like to see continued. Data from these types of studies may be used to develop region or watershed specific allowable exceedance frequencies, or a waterbody specific natural sources exclusion. Identifying natural uncontrollable sources may be just as important as identifying anthropogenic and controllable sources so BMP implementation can be properly focused.

The resources available to the San Diego Water Board for the development of TMDLs have been greatly reduced. Additionally, the same modeling approaches can be applied used in Bacteria TMDLs Project I can be applied to the bacteria TMDLs for Tecolote Creek. Given this information, including Tecolote Creek as a waterbody addressed by these TMDL is the best and most effective use of the limited available resources.

In addition, due to the diversion of resources to this project, and the expectation to complete at least two TMDLs (i.e., one TMDL is considered one pollutant and one waterbody combination), it was necessary to include the bacteria TMDLs for Tecolote Creek into this project.

Even though Tecolote Creek has been included into these TMDLs, that does not invalidate or nullify any of the studies and work performed by the City. In fact, the studies and the work done by the City are steps that will be necessary in the implementation of the TMDLs by the City. Hopefully the City of San Diego will continue the excellent work that they have undertaken and include their plans for future studies in the BLRPs or CLRPs that will be developed. Also, please see the response in Section 2.1.

Comment 95

Porter-Cologne Water Quality Control Act

Section 13241 of the act requires the Regional Board to complete a series of steps before adoption of a Basin Plan Amendment. Each Basin Plan Amendment is supposed to incorporate economic considerations. Review of this Tentative Resolution has concluded that this analysis is insufficient. The City of San Diego recommends compliance with all Porter-Cologne requirements.

Response: Please see the responses to Comment 10 and in Section 2.5.

Comment 96

Technical Report Section: Tentative Resolution Finding 35

Page: 15

Section Title/ Topic: Economic Analysis

Reason for Proposed Changes/Comments: “The San Diego Water Board has considered the costs...”

Comments/Proposed Changes: It is recommended that the Regional Board comply with the Porter-Cologne requirements and incorporate economic considerations. Please perform the economic analysis and provide the details in the Tentative Resolution.

Response: Please see the responses to Comment 10 and in Section 2.5.

Comment 97

Technical Report Section: 1

Page: 2

Section Title/ Topic: Table 1-1. Bacteria Impaired Water Quality Limited Segments

Reason for Proposed Changes/Comments: Several waterbodies have been proposed for delisting from the 2008 303(d) List. including San Dieguito Fecal Coliform and Enterococcus.

Miramar Reservoir HA Fecal Coliform and Enterococcus. several beaches in the Scripps HA, and Fecal Coliform and Enterococcus at Dog Beach.

Comments/Proposed Changes: It is recommended that the waterbodies already meeting bacteria standards be removed from the TMDL

Response: Please see the response in Section 2.1.

Comment 98

Technical Report Section: 1

Page: 4

Section Title/ Topic: Paragraph 3, first sentence

Reason for Proposed Changes/Comments: "In general, controllable point and nonpoint sources generating less than 5 percent of the total loads (e.g., Caltrans and/or Agriculture) were assigned WLAs and LAs equal to their existing loads, resulting in no load reduction requirements."

Comments/Proposed Changes: Please cite a reference or explain the rationale for assigning WLAs and LAs equal to existing loads based on a 5% rule.

Response: When examining the wet weather loads from different land uses modeled in each watershed, there were no loads from Caltrans predicted to be greater than 0.88 percent of the total load for any type of indicator bacteria. For agriculture, bacteria loads were predicted in 8 of the 13 modeled watershed. Of those 8 watersheds, there were 4 watersheds where the bacteria loads generated by agriculture land uses are clearly significant, predicted to contribute 10 percent (up to 60 percent) of the total load for all three indicator bacteria. The bacteria loads from agriculture land uses in the remaining 4 watersheds had bacteria loads that were typically well less than 5 percent of the total load and appeared to be insignificant compared to the loads generated by the Municipal MS4 land uses. Therefore, when developing the mass-load based WLAs and LAs, we used 5 percent in the method to identify sources than would not be required to reduce their modeled existing mass loads. This is discussed in Appendix I to the draft Technical Report. Also, please see the response in Section 2.7.2.

Comment 99

Technical Report Section: 1

Page: NA

Section Title/ Topic: Margin of Safety

Reason for Proposed Changes/Comments: The executive summary outlines most requirements of the TMDL, but does not include the Margin of Safety (MOS) or public participation.

Comments/Proposed Changes: Please incorporate information regarding the MOS (explicit, implicit, and why). as well as information on public participation.

Response: The second paragraph on page 4 of the draft Technical Report will be revised as follows:

A TMDL is equal to the sum of the wasteload allocations (WLAs), load allocations (LAs), and a margin of safety (MOS). Because of the conservative assumptions that were included in the development of the TMDLs, there was no explicit margin of safety included. Instead, the TMDLs include an implicit margin of safety (i.e., MOS = 0) by including conservative

assumptions throughout the TMDL analysis. The TMDL is divided up and assigned among the known point sources as wasteload allocations (WLAs) and nonpoint sources as load allocations (LAs). Portions of the TMDLs were assigned as WLAs to Municipal MS4s and Caltrans, and as LAs to Agriculture and Open Space land uses. Discharges from Municipal MS4s, Caltrans, and Agriculture land uses are considered controllable. Discharges from Open Space land uses are considered uncontrollable.

Comment 100

Technical Report Section: 1

Page: NA

Section Title/ Topic: Reference System Approach

Reason for Proposed Changes/Comments: The City of San Diego supports the reference system approach

Comments/Proposed Changes: The City of San Diego supports the use of a reference system approach for the development of the Bacteria Project I TMDL.

Response: This support for including the reference system approach in the TMDLs is appreciated.

Comment 101

Technical Report Section: 2

Page: NA

Section Title/ Topic: Reference System Approach

Reason for Proposed Changes/Comments: The City of San Diego supports the reference system approach

Comments/Proposed Changes: The City of San Diego supports the use of are reference system approach for the development of the Bacteria Project I TMDL.

Response: This support for including the reference system approach in the TMDLs is appreciated.

Comment 102

Technical Report Section: 3.2

Page: 19

Section Title/ Topic: Table 3-1. Beach and Creeks Addressed in this TMDL

Reason for Proposed Changes/Comments: The TMDL includes water bodies that are recommended for delisting from the 2008 303(d) list.

Comments/Proposed Changes: Developing and implementing TMDLs for waterbodies that are meeting water quality standards is prohibitive with the additional effort and costs required for TMDL compliance monitoring and reporting. The Clean Water Act 303(d)(1)(C) requires establishing TMDLs for waterbodies on the 303(d) List in accordance with the priority ranking. CWA 303(d)(1)(3) requires estimating TMDLs for all waterbodies for the purposes of developing information only. It is recommended that water bodies delisted from the 303(d) list be removed from the TMDL.

Response: Please see the response in Section 2.1.

Comment 103

Technical Report Section: 3.3

Page: 22

Section Title/ Topic: Table 3-2. Beneficial Uses of the Impaired Waters

Reason for Proposed Changes/Comments: Tecolote and Chollas Creeks are both designated as REC-2 beneficial use and a potential REC-1 beneficial use.

Comments/Proposed Changes:

Please clarify the application of REC-1 standards to waterbodies designated as only having a potential REC-1 beneficial use.

Response: A similar concern was raised during the public comment period of Bacteria TMDLs Project I before it was adopted in December 2007 (see comment 144 in Appendix S to the draft Technical Report).

Comment 104

Technical Report Section: 4.1.3

Page: 32

Section Title/ Topic: Allowable Exceedance Frequency for the Reference System Approach Paragraph 1

Reason for Proposed Changes/Comments: The 22% exceedance frequency used to calculate the wet weather TMDLs is based on a rain event of 0.1 inch, and the definition of a wet event is 0.2 inch in this TMDL.

Comments/Proposed Changes: Please revise the wet weather day definition to 0.1 inch.

Response: Please see the response in Section 2.2.

Comment 105

Technical Report Section: 4.1.3

Page: 32

Section Title/ Topic: Paragraph 1

Reason for Proposed Changes/Comments: The TMDL states that if the reference condition for wet weather is found to be different for watersheds in this TMDL compared to the Los Angeles TMDLs, then a request to amend the TMDL may be made.

Comments/Proposed Changes:

- Please define the methodology for amending the TMDL, and include a schedule for a TMDL re-opener. The following items should be considered when reopening the TMDL as found in the Santa Monica Bay Beaches TMDL, Resolution No. 2002-022:
- Refine allowable wet weather exceedance days based on additional data on bacterial indicator densities in the wave wash and an evaluation of site-specific variability in exceedance levels,
- Re-evaluate the reference system selected to set allowable exceedance levels, including an evaluation of natural variability in exceedance levels in the reference system(s),
- Re-evaluate the reference year used in the calculation of allowable exceedance days, and
- Re-evaluate whether there is a need for further clarification or revision of the geometric mean implementation provision.

Response: Please see the response in Section 2.6.

Comment 106

Technical Report Section: 4.1.4

Page: 33

Section Title/ Topic:

Summary of Wet Weather Numeric Targets for Mass-Load Based Calculations Paragraphs 2 and 4

Reason for Proposed Changes/Comments: Note: •All waterbodies in the San Diego Region designated with REC-1 beneficial use are assumed to have a-designated beach" usage frequency* (Enterococcus= 61 MPN/100 mL, Enterococcus geometric mean=33 MPN/100mL). Tecolote and Chollas Creeks are designated "potential REC-1" beneficial use, with a Basin Plan category of -designated beach: Dischargers must show that the usages are less frequent to apply the higher (less stringent) standard of 104 MPN/100mL for single sample WQO.

Comments/Proposed Changes: Please define the process for changing the usage frequency of a creek in the Basin Plan including the amount and type of data necessary to generate a Basin Plan Amendment.

Response: The federal regulations define the different usage frequencies in the Code of Federal Regulations Title 40 section 131.41, and the definitions are provided in the Basin Plan amendment. The process for changing the frequency has not been defined in this Basin Plan amendment, but like any other proposed changes to these TMDLs, changing the use frequency of a beneficial use will require a separate subsequent subsequent Basin Plan amendment.

The dischargers are free to propose the amount and type of data that will be collected. The dischargers are, however, encouraged to work with the San Diego Water Board before collecting and analyzing data. The Basin Planning staff of the San Diego Water Board will work with the project proponents to make sure the data collected will be suitable for the development of a Basin Plan amendment before it is collected.

Comment 107

Technical Report Section: 4.2.1

Page: 34

Section Title/ Topic: Allow Exceedance Frequency for Dry Weather Paragraph 1

Reason for Proposed Changes/Comments: Note: "...if adequate data are collected to characterize dry weather flows and bacteria densities using a statistical approach, the reference system approach may be an option that would allow an exceedance frequency to be included with the dry weather numeric targets in the dry weather TMDLs."

Comments/Proposed Changes:The Leo Canillo Beach reference study is currently used in Los Angeles for both the wet weather and dry weather TMDLs. It is recommended that a dry weather reference approach using Leo Carrillo data also be incorporated into this dry weather TMDL.

Response: Please see the response in Section 2.3.

Comment 108

Technical Report Section: 4.2.1

Page: 34

Section Title/ Topic: Table 4-2. Wet Weather Numeric Targets

Reason for Proposed Changes/Comments: The table lists the allowable wet weather exceedance frequency as 22% of the wet days.

Comments/Proposed Changes: An exceedance day approach allows for a direct relationship to waste load allocations, versus a variable number of exceedance days based on an allowable exceedance frequency. A set number of exceedance days also relates directly to the critical year, when the greatest threat to water quality is likely to occur. Using an exceedance frequency approach is unnecessarily conservative. It is recommended that an exceedance day approach be adopted, with a set number of allowable exceedance days based on the critical year.

Response: Please see the response to Comment 83.

Comment 109

Technical Report Section: 5.1.1

Page: 37

Section Title/ Topic: Water Quality Data Paragraph 1

Reason for Proposed Changes/Comments: The bacteria data used were collected from 1999 through 2002.

Comments/Proposed Changes: It is recommended that the most recent bacteria data be included in the TMDL assessment.

Response: The data inventory is specifically a list of the data that were used to develop the models. Data collected after the models were developed were not included and will not be included at this time. The models may be modified with additional data in the future if the City would like to do so.

Comment 110

Technical Report Section: 5.1.1

Page: 38

Section Title/ Topic: Table 5-1. Inventory of data and Information Used for the source of Assessment of Bacteria

Reason for Proposed Changes/Comments: The land use data used in the TMDL development is from SANDAG 2000 which is outdated.

Comments/Proposed Changes: A comparison of the land use proportions for each watershed area was made between the 2000 and 2009 SANDAG data. An increase in low-density residential and decrease in open space was observed in San Dieguito Miramar, Scripps, and lower San Diego River. It is recommended that the most recent land use data be applied when estimating load contributions from land uses.

Response: Please see the response to Comment 109.

Comment 111

Technical Report Section: 5.3

Page: 46

Section Title/ Topic: Analyses of Beach Water Quality Versus Magnitude of Streamflow
Reason for Proposed Changes/Comments: The text states that a "statistical comparison" of flow versus bacteria density was completed to evaluate historical effects of high- and low-flow conditions. It is not clear from the text what statistics were used.

Comments/Proposed Changes: Please clarify what the statistical comparison was and what the results mean. There appears to be no correlation between high or low flows and bacteria concentrations, as stated in the text.

Response: Please refer to the figures that follow the text. There are mean, minimum, and maximum statistics for flow and concentration for each month. High fecal coliform densities were observed under low-flow and high-flow conditions. This indicates that the sources of the bacteria cannot be determined simply with this information alone given the different sources under wet weather and dry weather conditions. This indicates the need to assess bacteria sources separately during both wet weather events and dry weather conditions, as stated in the text.

Comment 112

Page: 50

Section Title/ Topic: Wet Weather Transport

Reason for Proposed Changes/Comments: It appears, from Appendix J, that build-up and wash-off rates were utilized from a SCCWRP study in Santa Monica Bay. The wash-off information was specific to 8 land use types. However, the allocation of total loads back to specific land uses was based solely on apportioning the load back to the percentage of each land use within a watershed area.

Comments/Proposed Changes: Bacteria contributions during wet weather are different for different land use types, with some contributing greater concentrations than others. Taking the total load and apportioning the land use contribution back to the proportion of land use in a watershed does not account for the differences in loading from each land use type. Although land use specific build-up and wash-off values were used to estimate the total load, how were the land use specific load estimates validated? Please clarify the methodology for apportioning loads back to land uses.

Response: The methodology is explained in Appendix J to the Technical Report.

Comment 113

Technical Report Section: 7.1.1.d

Page: 55

Section Title/ Topic: Constituents Paragraph 2

Reason for Proposed Changes/Comments: "First-order die-off is likely the most important dynamic process to simulate in the San Diego Region, despite observations that bacteria re-grow in low flow conditions."

Comments/Proposed Changes: There are studies currently underway to estimate the amount of re-growth of bacteria occurring in the MS4. It is recommended that data from these studies be incorporated into the TMDL when it is re-opened in the future.

Response: Please see the responses to Comments 86 and 87, and in Section 2.6.

Comment 114

Technical Report Section: 7.2

Page: 55

Section Title/ Topic: Wet Weather Modeling Analysis

Reason for Proposed Changes/Comments: Although the build-up and wash-off of bacteria for specific land uses was used in the model, land use-specific wet weather data are available to estimate load contributions during wet weather events.

Comments/Proposed Changes: Data exist that estimate observed bacteria load contributions per acre for land uses and may be used in conjunction with build-up/wash-off estimates to ensure that estimated load contributions from specific land uses are as accurate as possible. It is recommended that more precise land use-based load estimates be incorporated into the TMDL when it is re-opened at a future date.

Response: Please see the responses to Comments 86, 87, and 109, and in Section 2.6.

Comment 115

Technical Report Section: 7.3

Page: 56

Section Title/ Topic: Dry Weather Modeling Analysis Paragraph 1

Reason for Proposed Changes/Comments: "A statistical relationship was established between stream flow bacteria densities, and areas of each land use."

Comments/Proposed Changes: Please identify which statistics were used and how they represent the linkage between source contributions and in stream response. Please clarify the use of statistics to link stream flow bacteria densities and land use.

Response: Please see Appendix K to the draft Technical Report.

Comment 116

Technical Report Section: 8.1.3

Page: 61

Section Title/ Topic: Table 8-2. Allowable Wet Weather Exceedance Days in the Critical Period (1993) for Watersheds Affecting Impaired Waterbodies

Reason for Proposed Changes/Comments: The statement allowable wet weather exceedance days in the critical period (1993)" is repeated throughout the section. However, it is not explicitly stated that this is the number of allowable exceedance days for any calendar year moving forward with the TMDL.

Comments/Proposed Changes: It is recommended that the TMDL be modified to include an allowable number of exceedance days for compliance with the TMDL based on the critical condition.

Response: Please see the response to Comment 83.

Comment 117

Technical Report Section: 8.1.6

Page: 64

Section Title/ Topic: Allocation of Wet Weather Bacteria mass loads to Point and Nonpoint sources Paragraph 2

Reason for Proposed Changes/Comments: If concentrated animal feeding operations (CAFOs) are regulated as point source discharges, why are there no monitoring data associated with the facilities? They are included in the TMDL as controllable non-point sources due to no data available to estimate their bacteria load.

Comments/Proposed Changes: It is recommended that an effort should be made to quantify the bacteria load from the CAFOs.

Response: Please see the response to Comment 16.

Comment 118

Technical Report Section: 9.3.3

Page: 89

Section Title/ Topic: Alternative Enterococcus wet weather TMDLs

Reason for Proposed Changes/Comments: “moderately to light used area” compared to “frequently”

Comments/Proposed Changes: Please define process and data requirements for implementing the beach usage frequency change

Response: Please see the response to Comment 106.

Comment 119

Technical Report Section: 11.2.2.1

Page: 100

Section Title/ Topic: Point Sources

Reason for Proposed Changes/Comments: Numeric Targets: wet weather consists of REC-1 single sample maximum WQOs and 22% allowable exceedance frequency. Dry weather consist of REC-1 30-day geometric mean WQOs and 0% exceedance frequency.

Comments/Proposed Changes:It is recommended that the allowable number of exceedance days be set based on the critical year as shown in Tables 9-1 through 9-4c.

Response: Please see the response to Comment 83.

Comment 120

Technical Report Section: 11.2.2.1

Page: 102

Section Title/ Topic: 4th Bullett

Reason for Proposed Changes/Comments:

No surface runoff is assumed during dry weather and therefore the entire dry weather bacteria load is allocated to the MS4

Comments/Proposed Changes:

This assumption is invalid and several studies have shown that dry weather bacterial exceedances are also caused by sources other than the MS4, such as birds

Response: Please see the responses to Comments 2 and 89, and in Section 2.4.

Comment 121

Technical Report Section: 11.2.2.1

Page: 102

Section Title/ Topic: Load Reductions

Reason for Proposed Changes/Comments: “The load reductions required to meet the mass-load based TMDLs, WLAs and LAs are based on reducing the loads compared to pollutant loads from 2001 to 2002:

Comments/Proposed Changes: Please clarify this statement because the fourth bullet under this heading explicitly states that “The load reductions needed to meet the WLAs for point sources and the LAs for nonpoint sources are assumed to be achieved when the numeric targets are met in the receiving waters.”

Response: These are two of the assumptions and requirements included in the calculation of the TMDLs, WLAs, and LAs that should be considered when developing WQBELs to be incorporated in to NPDES requirements and for assessing compliance.

Comment 122

Technical Report Section: 11.2.1

Page: 103

Section Title/ Topic: Load Reductions

Reason for Proposed Changes/Comments: “.CAFOs, and any other unidentified point sources were not assigned WLAs. which is equivalent to being assigned a WLA of zero.”

Comments/Proposed Changes: Please clarify how these load allocations will be implemented and verified.

Response: Please see the responses to Comment 16 and in Sections 2.7.1 and 2.7.2. If a CAFO is identified as a significant sources that is discharging to a receiving water, the San Diego Water Board will need to take enforcement action so the CAFO ceases its discharge to be consistent with a WLA = 0.

Comment 123

Technical Report Section: 11.2.6

Page: 114

Section Title/ Topic: Basin Plan Amendments Paragraph 2

Reason for Proposed Changes/Comments: Revisions to the Basin Plan typically require substantial evidence and supporting documentation to inmate the Basin Plan Amendment process. Given the severely limited resources available to the San Diego Water Board for developing Basin Plan amendment projects, developing the evidence and documentation to initiate a Basin Plan amendment will be the responsibility of the dischargers and for other parties interested in amending the requirements or provisions implementing these TMDLs”

Comments/Proposed Changes: Please clarify the process for amending the Basin Plan, including the amount of data necessary and the process to petition the Regional Board. It would be beneficial to schedule a TMDL re-opener to address proposed changes.

Response: Please see the responses to Comments 106 and in Section 2.6.

Comment 124

Technical Report Section: 11.3

Page: 116

Section Title/ Topic: Monitoring for TMDL Compliance and Compliance Assessment

Reason for Proposed Changes/Comments: Monitoring: wet weather monitoring at least once within 24 hours of the end of a storm event that occurs between October 1st and April 30th.

Comments/Proposed Changes: Sampling each wet weather event may be cost prohibitive, and a subset of wet weather events each year should be prescribed or allowed if dischargers wish to incorporate a prescribed monitoring program in their CLRP or BLRP. It is recommended that the number of wet weather monitoring events be set by the dischargers.

Response: Please see the response to Comment 66. The dischargers will be given an opportunity to propose a wet weather monitoring program, but we have also specific the minimum monitoring that will be required.

Comment 125

Technical Report Section: 11.3

Page: 116

Section Title/ Topic: first complete bullet

Reason for Proposed Changes/Comments: "Dry weather monitoring should occur at least on a monthly basis, and may be required weekly."

Comments/Proposed Changes: At a minimum, to calculate a geometric mean, 5 samples per 30 days must be collected. Please define the process for using a single monthly sample to assess TMDL compliance.

Response: This section discusses the minimum monitoring components required in any monitoring program. More specific information is provided in the following sections. For dry weather TMDL compliance monitoring, "the method and number of samples needed for calculating the 30-day geometric mean should be consistent with the number of samples required by the Ocean Plan for beaches, and the Basin Plan for creeks," which is stated on page 118 of the draft Technical Report.

Comment 126

Technical Report Section: 11.3

Page: 119

Section Title/ Topic: Paragraph 2

Reason for Proposed Changes/Comments: Exceedance frequency calculation

Comments/Proposed Changes: It is recommended that the TMDL should set the number of allowable exceedance days at a site instead of an exceedance frequency calculated every year.

Response: Please see the response to Comment 83.

Comment 127

Technical Report Section: 11.3

Page: 119

Section Title/ Topic: Paragraph 3

Reason for Proposed Changes/Comments: 30-day wet weather geometric mean

Comments/Proposed Changes: It is recommended that the calculation of the 30-day geometric mean for compliance with the wet weather TMDL not include dry weather days. If separate dry day wet season exceedance criteria are set as recommended then the 30-day geometric mean should not be calculated.

Response: Please see the response in Section 2.7.

Comment 128

Technical Report Section: 11.4.6

Page: 126

Section Title/ Topic: Identification of Natural Versus Anthropogenic Sources of Bacteria

Reason for Proposed Changes/Comments: Section 11.4.3 states: Indicator bacteria are used to measure the risk of swimmer illness because they have been shown to indicate the presence of human pathogens, such as viruses, when human bacteria sources are present." And: "The risk of contracting a water-borne illness from contact with urban runoff devoid of sewage, or human-source bacteria is not known."

Comments/Proposed Changes: It is recommended to use the identification of human versus non-human sources of bacteria since non-human bacteria sources have not been demonstrated to affect human health and the analysis is less costly.

Response: Please see the response to Comment 86.

Comment 129

Technical Report Section: 11.5.2

Page: 135

Section Title/ Topic: Paragraph 2

Reason for Proposed Changes/Comments: BLRPs or CLRPs are due to the Regional Board within 18 months

Comments/Proposed Changes: The City of San Diego supports submission of the BLRPs and/or CLRPs 18 months after the TMDL effective date.

Response: This support for submission of the BLRPs and/or CLRPs 18 months after the TMDL effective date is appreciated.

Comment 130

Technical Report Section: 11.5.2

Page: 136

Section Title/ Topic: Tables 11-6 and 11-7 Compliance Schedules

Reason for Proposed Changes/Comments: TMDL compliance must be achieved for both wet and dry weather 10 years after TMDL effective date

Comments/Proposed Changes: Please provide the rationale for changing the TMDL compliance schedule from 20 years to 10 years.

Response: Please see the response to Comment 80.

Comment 131

Technical Report Section: 14

Page: NA

Section Title/ Topic: Tecolte Creek

Reason for Proposed Changes/Comments:

The City of San Diego initiated contact with the Regional Board staff beginning in during the first quarter of 2008. The following meetings/projects occurred:

- City begins talking with Regional Board about Tecolote Phase I study 1st Quarter 2008
- City requests data used in TMDL development for I comparison to Phase I study results -June 2008
- Final Tecolote Creek Phase I report produced –August 2008
- City begins collaboration with SCCWRP (review of work plan) -September 2008
- City presents results of Phase I study and presents outline for Phase II study and asks for Regional Board input -October 9, 2008
- City presents preliminary results of Phase II study to Regional Board input – April 17, 2009
- Final Tecolte phase II report produced – June 2009

Comments/Proposed Changes: It is recommended that the data collected in support of the Tecolote TMDL be incorporated into the final TMDL prior to final adoption of the TMDL.

Response: Please see the responses to Comments 87 and 94.

Comment 132

Technical Report Section: J

Page: NA

Section Title/ Topic: Tecolote Creek

Reason for Proposed Changes/Comments: The USGS stations used for hydrology calibration and validation are not representative of the Tecolote watershed. The selected stations are for very large watersheds, located far up the watershed, or located in Riverside or Orange County. None of these stations adequately represent the features associated with Tecolote, such as size, topography, soil classification, and land use combination.

Comments/Proposed Changes: It is recommended that the model used to estimate the existing exceeding frequency for wet weather be calibrated on Tecolote or similar type watershed

Response: The regional wet weather watershed models were calibrated based, in part, on data from the Tecolote Creek watershed. The model estimated "existing" exceedance frequency for Tecolote Creek is appropriate. If the City of San Diego would like to expend the resources to develop a watershed specific model to estimate an "existing" exceedance frequency for the Tecolote Creek watershed, the San Diego Water Board would support such efforts.

Comment 133

Technical Report Section: M

Page: NA

Section Title/ Topic: Calibration Statistics

Reason for Proposed Changes/Comments: The "error in 10% highest flows" and "error in storm volumes" does not meet the "recommended criteria" (stated as 15% and 20%, respectively) for the majority of the sites used for comparison during either the calibration period, validation period, or both periods. In some cases, the errors are two to three times greater than the recommended criteria.

Comments/Proposed Changes: It is recommended that the model be better calibrated in order to more accurately represent the hydrology of San Diego

Response: The model was adequately calibrated for the purposes of developing these TMDLs. If the City of San Diego would like to expend the resources to refine the calibration of the wet weather watershed models, the San Diego Water Board would support such efforts.

Comment 134

Technical Report Section: N

Page: NA

Section Title/ Topic: Tables N-8 through N-14

Reason for Proposed Changes/Comments: The LSPC model results do not accurately correlate to the observed data (see tables on N-8 through N-14). Many of the model values are several magnitudes different from the observed data. The model does not appear to be validated. Errors in the pollutant model maybe related to the significant errors in the hydrology model (see comments relating to Appendix M).

Comments/Proposed Changes: It is recommended that criteria be stated for the accuracy of the model, and the model be calibrated so that, in general, the modeled values meet the criteria.

Response: The model was adequately calibrated for the purposed of developing these TMDLs. If the City of San Diego would like to expend the resources to refine the wet weather watershed models, the San Diego Water Board would support such efforts.

Comment 135

Technical Report Section: Appendix U

Page: U-24

Section Title/ Topic: Comment 306

Reason for Proposed Changes/Comments: A comment was made regarding the use of land use specific water quality data and the implications to the TMDL WLAs.

Comments/Proposed Changes: It is recommended that the land-use-specific water quality data that have been collected within the Tecolote Watershed be used for comparisons against model predictions.

Response: If the City of San Diego would like to expend the resources to refine the wet weather watershed models with land-use specific water quality data collected from Tecolote Creek, the San Diego Water Board would support such efforts.

Comment 136

Technical Report Section: Appendix U

Page: U-38

Section Title/ Topic: Comment 327

Reason for Proposed Changes/Comments: The comment was made that up to date land use data should be used. The response was that San Diego Water Board Staff and stakeholder; should investigate the possibility when the final TMDL was being revised.

Comments/Proposed Changes: Please include the most current land use data in the TMDL provide rationale for why newer data were not used

Response: Given the reduced resources available, the models were not updated. If the City of San Diego would like to expend the resources to refine the wet weather watershed models, the San Diego Water Board would support such efforts. The TMDLs could be modified after these TMDLs have been adopted and the implementation has begun.

Comment 137

Technical Report Section: Appendix U

Page: U-1

Section Title/ Topic: List of Persons Submitting Comments

Reason for Proposed Changes/Comments: The City of San Diego is not listed as having provided comments. Section 2-Comment Number and Categories lists the City of San Diego as providing comment.

Comments/Proposed Changes: Please add the City of San Diego to the list of contributors.

Response: The revision will be made as suggested by the commenter.

Comment 138

Technical Report Section: Appendix U

Page: U-8

Section Title/ Topic: Comment 287

Reason for Proposed Changes/Comments: In a response to a query regarding the practicalities of a natural source exclusion approach, six categories are provided as a general framework.

Comments/Proposed Changes: The inclusion of source identification studies, together with epidemiological studies would be impossible to attain both practically and financially.

Response: The key words in the response to that comment were “weight of evidence.” The six elements in the framework are all sources of evidence that may be used in making a decision.

Comment 139

Technical Report Section: Appendix U

Page: U-26

Section Title/ Topic: Comment 309

Reason for Proposed Changes/Comments: Comment was made regarding the impact of non-anthropogenic bacteria sources on MS4 discharges.

Comments/Proposed Changes: Recent investigations in Tecolote Creek watershed indicate that bio film growth within the MS4 can comprise communities of fecal indicator bacteria, but that these populations are rarely of fecal origin. Please provide methodology or process for how will these data be used under a natural source exclusion approach.

Response: The process has not been defined in the Basin Plan amendment, but will require a subsequent Basin Plan amendment. The dischargers are free to propose the methodology. The dischargers are, however, encouraged to work with the San Diego Water Board before collecting and analyzing data. The TMDL and Basin Planning staff of the San Diego Water Board will work with the project proponents to make sure the data collected will be suitable for the development of a Basin Plan amendment to incorporate a natural sources exclusion. The general process for using the natural sources exclusion approach is described in the Basin Plan amendment and technical report adopted under Resolution No. R9-2008-0028.

Comment 140

Technical Report Section: Appendix U

Page: U-26

Section Title/ Topic: Comment 310

Reason for Proposed Changes/Comments: Comment was made regarding the use of REC-1 designation during storm events

Comments/Proposed Changes: The RWQCB response did not fully address the association between public health risk, designation and TMDLs. Please clarify the REC-1 designation during storm events

Response: The Basin Plan does not provide any exceptions to the REC-1 beneficial use during storm events. Thus, the REC-1 beneficial use designation applied during storm events as well. However potential refinements or subcategorization of beneficial uses could be proposed and may be considered in the future. Please see the response to Comment 85.

4.10 City of Santee

Comment 141

Compliance should be measured on a load reduction basis to allow cities to implement and receive credit for effective BMPs that benefit the watershed

The TMDL will require the City to establish a baseline bacteria level from data gathered between 2001 and 2002. This is appropriate as it allows the cities to receive credit for any reductions achieved since that time. However, page A 54 of the TMDL states:

For the dry weather TMDLs, available historical monitoring data from the year 2002 to the effective date of these TMDLs should be used to calculate the "existing" dry weather exceedance frequency of the 30day geometric mean REC-I WQOs for each watershed.

This language conflicts with the 2001 to 2002 baseline established elsewhere in the TMDL. More importantly however, it would effectively punish the City for bacteria reductions it has made in the watershed since 2005. As the Regional Board is aware, the City has invested several million dollars restoring Forester Creek. The improvements in Forester Creek have resulted in reduced bacteria levels downstream of the restoration project. The City should not be punished for making improvements in the watershed by being forced to comply with what would amount to an artificially low discharge standard. The above quoted language should therefore be revised to set the baseline data used to calculate the "existing" dry weather exceedance frequency at levels from 2001 to 2002. This will prevent the City from being punished for its efforts to improve regional water quality.

Suggested Revision: Revise the TMDL to set the baseline for dry weather flows and exceedances at 2001 to 2002 levels. Revise the TMDL to allow ultimate compliance to be measured on a load reduction basis.

Response: The paragraph referenced by the commenter will be revised as follows:

For the dry weather TMDLs, available historical monitoring data from the years 1996-2002 ~~to the effective date of these TMDLs~~ should be used to calculate the "existing" dry weather exceedance frequency of the 30-day geometric mean REC-I WQOs for each watershed.

Comment 142

The City is also concerned with how credit is allocated for restoration projects and other bacteria reducing best management practices ("BMPs"). The decision to change the TMDL's compliance measure from a load based measure to a concentration based measure could preclude the use of future BMPs to reduce bacteria loads. In some cases the only effective BMPs to control bacteria require removal and treatment, or diversion and treatment of water. Such BMPs reduce overall loads, but could increase concentrations in a given water body. This is especially true for inland creeks and streams that do not get the benefit of dilution from the ocean. Overall, the City and other potential dischargers need the flexibility to implement BMPs that will improve water quality throughout the region. To allow this, the TMDL should be revised to allow ultimate compliance with the TMDL to be measured on a load reduction basis.(1)

¹ Federal Regulations allow a TMDL to "be expressed in terms of either mass per time, toxicity, or other appropriate measure." (40 C.F.R. § 130.2(i).) It is the City's position that this does not expressly authorize the Regional Board to issue a concentration based TMDL, and that by measuring ultimate compliance with the TMDL by bacteria concentration in the receiving waters, the Regional Board may be violating the Clean Water Act.

Response: Please see the response to Comment 92.

Comment 143

A heightened REC-1 Standard is being imposed on non-Rec-1 water bodies

The TMDL is imposing a REC-1 Designated Beach Area standard for a number of inland creeks and water bodies that do not warrant this designation. As a result, the TMDL will impose a heightened standard on these water bodies that is not necessary to protect the beneficial uses of these water bodies, or the environment in general. The TMDL recognizes that it is over-inclusive:

In some cases, the "designated beach" category may be overprotective of water quality because of the infrequent recreational use in the impaired freshwater creeks. The recreational usage frequency in these freshwater creeks may correspond to the "moderately to lightly used areas" category, which has an enterococci freshwater REC-1 single sample maximum WQO of 108 MPN/100mL.

Before the less stringent enterococci single sample maximum saltwater REC-1 WQO may be applied to a freshwater creek, the Basin Plan must be amended to designate a lower usage frequency ("moderately to lightly used area") for each freshwater creek. If information and evidence are provided to justify the "moderately to lightly used area" usage frequency for a freshwater creek, and the designated usage frequency the freshwater creek is amended to "moderately to lightly used area" in the Basin Plan, the wet weather TMDLs that were calculated in a watershed that was modeled with a freshwater creek using the enterococci saltwater REC-1 WQOs can be implemented instead. (TMDL, AIS.)

This places an unnecessary burden on the Cities. The inland water bodies deemed likely to be designated as being lightly used should be treated as such anyway. Water bodies, including Forester Creek, for which there is no body contact, the shallow depth or lack of water prevents such contact, should be appropriately designated at REC-2. A high standard has been set to get these changes made in future. This would be an excessive diversion of resources from improving the water bodies that are going to be used by the public, to creeks that do not require the same level of attention, simply to get the requirements at these unused creeks reduced. Not only is this a waste of resources, imposing this higher standard on inland surface bodies without evidence that it is necessary to achieve the water quality objectives is an abuse of discretion.

Lastly, the TMDL dismisses the over-inclusive nature of the designation of as high use areas on the grounds that a Basin Plan amendment would be required to allow the Regional Board to treat these water bodies in any other way. (TMDL A22.) The fact that the proposed TMDL is itself a Basin Plan Amendment appears to be lost in the minute.. Sufficient evidence of the average daily and seasonal use of these water bodies could easily be provided by the regulated parties. The proposed TMDL therefore could, and should incorporate a new designation for all such water bodies, with new LAs and WLAs based on inland surface water data. These revisions should

start with Forester Creek, which the TMDL now treats as a heavily used beach, but which in reality receives no body contact use.

Suggested Revision: Designate Forester Creek as a REC-2 water body, and revise the WLAs assigned to it based on this designation. Designate other inland surface waters including the San Diego River as "Infrequently Used Full Body Contact" water bodies, and revise the WLAs assigned for those bodies based on the this designation.

Response: Unfortunately, amending the Basin Plan to re-designate a usage frequency or a beneficial use for a waterbody is not as simple as the commenter suggests. Sufficient evidence is required before a Basin Plan amendment such as re-designating a usage frequency or removing a beneficial use can be developed. If there are sufficient data and evidence warrant, a Basin Plan amendment will be developed as soon as practicable. The Basin Plan amendment may require scientific peer review and will definitively require a public process before it can be adopted. This process ensures that the public has a chance to weigh in on any decision to lower the frequency of use before the decision is made. This public process is required by law and is a protected public right.

The draft Basin Plan amendment includes a section on page A49 that outlines the elements necessary to do a Basin Plan amendment that would have an effect on the implementation of these TMDLs. Since the adoption of the original Bacteria TMDLs Project I in December 2007, no municipality or other entity has come forward with any data to support re-designating the usage frequency of any of the beaches or creeks included in this project.

One other type of Basin Plan amendment that could be considered is one that proposes to refine or subcategorize beneficial uses to allow them to be applied with greater flexibility. As a relevant example, a concrete channel during an intense storm may not be accessible to the public for recreation. In this situation, a more restricted refinement of the REC-1 beneficial use could be proposed and considered. In any case, a separate subsequent Basin Plan amendment is required.

Until the Basin Plan is amended to modify the usage frequency or beneficial uses, the TMDLs will be implemented as the usage frequencies and beneficial uses are currently designated in the Basin Plan.

Comment 144

There is no meaningful Natural Source Exclusion

The TMDL does not include a meaningful natural source exclusion for discharges that cause exceedances of the TMDL limits. When a water body subject to the TMDL is not meeting the TMDL requirements, the City will be required to reduce its bacteria discharges, or prove that its discharges are not causing the exceedances. (TMDL A42, A53.) If neither condition is met, the City will be considered out of compliance with the TMDL. This is an unmanageable standard.

Numerous uncontrollable sources of bacteria have been deemed "controllable sources" in the TMDL. These sources include bacteria loads discharged from Low Density Residential, High Density Residential, Commercial/Institutional, Industrial/Transportation, Military, Parks/Recreation, and Transitional land use types that are included in the Municipal MS4s category. (TMDL A17.) They also include bacteria loads discharged from Agriculture,

Dairy/Intensive Livestock, and Horse Ranch land use types are included in the Agriculture category. (Id.) In many cases, the discharges from these sources will not come from end of pipe discharges from the City's MS4. The City will nevertheless be charged with controlling and/or demonstrating that these difficult to pinpoint sources are causing the exceedances.

The City lacks the authority to regulate many of the above listed sources. The natural sources, including some not listed above, are diffuse and may lie beyond the City's jurisdiction. Some of the other listed sources are state or local agencies. California law clearly limits a city's ability to regulate state agencies within its jurisdiction. (See Cal Gov. Code § 53091; see also *Hall v. Taft* (1956) 47 Cal.2d 177 [holding that when the State engages in sovereign activities it is not subject to local regulations unless the California Constitution says it is, or the legislature has consented to it].)

Pursuant to the Clean Water Act, background pollutant loads such as those listed above are to be included in a TMDL's load allocation and not attributed to point source dischargers. (See 40 C.F.R. § 130.2(g).) Moreover, the history of the Clean Water Act demonstrates that Congress and the EPA intended cities and other MS4 dischargers to regulate urban runoff rather than agricultural sources and other diffuse and non-point source discharges. Indeed, when issuing the MS4 Permit regulations in 1990, EPA stated, "it is the intent of EPA that [stormwater] management plans and other components of the programs focus on the urbanized and developing areas of the county." (55 Fed. Reg. 47989, 48041 (Nov. 16, 1990).) The urban discharge focus is reflected in the San Diego Region Basin Plan which discusses the problem of stormwater runoff in terms of urbanization and cites to EPA Guidance limiting regulation of stormwater to urban sources. (See San Diego Basin Plan, pp. 4-78, 4-79.) Consequently, under both the Clean Water Act, and state law, the Regional Board lacks the authority require City to regulate discharges that are beyond its authority to control.

As a practical matter, this standard is too high. It is not clear what proof of responsibility will be acceptable to the Regional Board to demonstrate that all controllable sources have been removed. A more efficient approach would be to classify all natural sources (including groundwater seepage) as natural sources) and if the bacteria limits are not being met at the end of the TMDL implementation period, verify the loads from natural sources as part of an overall source investigation that includes all potentially responsible dischargers. The presumption that City is responsible for all bacteria levels in a watershed must be removed. Not only is such a presumption impractical, but it holds the City responsible for natural conditions discharges from other entities in a manner that would appear to violate state and federal law.

Suggested Revision: Revise the TMDL to clarify that the MS4 dischargers, including the City, will not be presumed responsible for all discharges to a water body if that water body is not meeting the TMDL's limits. Instead, the relevant sections of the TMDL on pages A 52 through A 57 should be revised to state: If at the end of the TMDL compliance schedule the receiving waters exceed the 30-day geometric mean REC-1 WQOs, the Regional Board will issue investigative orders, enforcement actions, WDRs, or conditional waivers of WDRs as necessary to determine the source of the exceedances. In addition include "groundwater seepage in the list of natural sources in the paragraph on A 16 labeled (c) Source Analysis.

Response: Please see the responses to Comments 35 and 79, and in Sections 2.7.1 and 2.7.2.

Comment 145

Maximum loads and exceedance percentages for inland waterbodies should have been developed with data from inland water bodies, and need to be revised.

The model upon which the TMDL is based relies on a limited data set focuses on exceedances at beaches and river mouths. This data was extrapolated to develop bacteria levels for inland locations without taking into account the different conditions at inland water bodies, including reduced flow a lack of tidal influence. It is necessary to use data from inland creeks to assess the baseline percentage of exceedances for these locations, as it is likely these will be vastly different from those observed on the coast. In addition, data used from inland sources should be used in calculating the numeric targets, as the use of concentrations (particularly those collected at beaches and river mouths) skew the targets to be attainable on the coast, but not inland, even if the loads inland are the same or less.

Suggested Revision: Revise the maximum loads and exceedance percentages for inland water bodies so that they are based on data from an inland reference system, and so that they reflect their frequency of use.

Response: The numeric targets that were used to calculate the mass-load based TMDLs are the same as the concentration based TMDLs, all of which originate from the REC-1 WQOs in the Basin Plan. There were no calculations necessary for developing the numeric targets because the REC-1 WQOs are numeric, and the exceedances frequencies that were chosen to be similar to those used in the Los Angeles Region.

The goal of any TMDL is to restore the beneficial uses of an impaired waterbody. This means that the water quality objectives that support those beneficial uses must be met in the receiving waters. The REC-1 WQOs are not expected to be significantly altered in the near future.

At this time for these TMDLs, the San Diego Water Board has chosen to use a 22 percent allowable exceedances frequency of the single sample maximum water quality objectives specific to wet weather. We have not chosen an allowable exceedance frequency of the geometric mean that is greater than 0 percent for wet weather or dry weather TMDLs. Also, please see the response in Section 2.7.1.

The San Diego Water Board supports developing and establishing an allowable exceedance frequency of the single sample maximum and/or geometric mean based on data collected from reference systems in the San Diego Region. Until then, the allowable exceedance frequencies that have been initially selected for implementation are appropriate and applicable for both the wet weather TMDLs and dry weather TMDLs.

Comment 146

The definition of “Wet Weather” needs to be revised to match relevant modeling data.

Much of the TMDL’s technical analysis is based on data from a study of conditions at Leo Carrillo State Beach. The Regional Board used this date to establish a frequency at which beaches and creeks covered by this TMDL are allowed to exceed bacteria water quality objectives during wet weather. Exceedance frequencies in the Leo Carrillo watershed were calculated based on wet weather days defined as rainfall events of at least "0.1 inch and the following 72 hours" (Resolution No. 2002-002).

In contrast, the TMDL defined wet weather days as "rainfall events of 0.2 inches or greater and the following 72 hours." It is scientifically invalid to apply the wet weather exceedance frequency observed at Leo Carrillo Beach to a TMDL that uses a different definition of wet weather days. The exceedance frequency for rainfall events greater than 0.2 inches is very likely to be different than 22%. Wet weather days in this TMDL should be defined as "any rain event 0.1 inch or greater and the following 72 hours."

Suggested Revision: Revise the TMDL so that a wet weather day is defined as any rain event 0.1 inch or greater and the following 72 hours.

Response: Please see the response in Section 2.2.

Comment 147

A zero exceedance WLA is not reasonably achieved

The TMDL will impose a zero exceedance discharge requirement on the City during periods of dry weather. The zero exceedance discharge requirement is problematic because the dry weather discharge limitations are so low that they are not reasonably achievable. This would be the case even if the City could control 100% of its dry weather discharges because other entities, including agricultural operations, natural groundwater seeps, and other state agencies contribute dry weather flows to the region's watersheds.

One of the major underlying assumptions of the TMDL is that these entities and land uses will not have dry weather flows. (TMDL, Finding 22.) This assumption fails to account for background discharges during dry weather that are uncontrollable by the Cities. Moreover, studies by the Southern California Coastal Water Research Project (SCCWRP) have shown that reference systems, including San Mateo Creek in San Diego County, contain natural flows during the dry season. (Ticfenthaler, L., E. Stein and G. Lyon. 2008. Fecal indicator bacteria levels during dry weather from Southern California reference streams. SCCWRP Annual Report, Costa Mesa, CA). In order to avoid the negative ramifications of this assumption, the TMDL needs to be revised to either: 1) raise the overall dry weather standard so that exceedances will not occur, or 2) allow a number of exceedance days, in an approach similar to the wet weather portions of the TMDL.

There have been numerous comments submitted on this issue throughout the TMDL development process. However it is worth reiterating that the basis for imposing this zero discharge requirement in the TMDL is legally and factually deficient, particularly when applied to inland surface water bodies. As stated above, studies by the Southern California Coastal Water Research Project (SCCWRP) have shown that reference systems, including San Mateo Creek in San Diego County, contain natural flows during the dry season. There is simply no basis for assuming that natural conditions do not result in dry weather flows. Moreover, by assuming that all dry weather flows are caused by municipal discharges, the TMDL will hold the City responsible for controlling non-point sources of pollution, discharges that are beyond its responsibility under the Clean Water Act.

The TMDL's attempt to hold the City responsible for such discharges is especially frustrating given that many of the entities implicated by this requirement are required to obtain their own NPDES permits, and thus should be regulated directly by the Regional Board. The Regional Board's failure to regulate discharges from these entities should not be imputed to the City. The

Regional Board's attempt to impose responsibility for these discharges on the City is arbitrary, capricious, and without justification. A quick solution to this issue could include allowing a 3% exceedance frequency during dry weather, based on data from the Leo Carrillo Beach reference system, until a more appropriate frequency can be established based on data collected from a reference system in the San Diego region.

Suggested Revision: Revise the TMDL to allow a 3% exceedance frequency during dry weather until a more appropriate frequency can be established based on data collected from a reference system in the San Diego region.

Response: Please see responses in Sections 2.3, 2.4, and 2.7.1.

Comment 148

The TMDL implies that BLRPs will require Cities to develop plans that cover more than Bacteria.

At the bottom of page A48, the TMDL states that BLRPs or CLRPS "must be capable of achieving the WLAs for the bacteria TMDLS, restoring the beneficial uses in receiving waters for other impairing pollutants in the watershed, and achieving the goals and objectives of any other water quality improvement projects included in the BLRPs or CLRPs within the time frame of the compliance schedule."

According to other passages in the TMDL, BLRPs are intended to address only bacteria loads, and would not include the other items in the paragraph quoted above. This appears to be a typographical error. Please revise this portion of the TMDL to clarify that the more comprehensive requirements apply to CLRPs only.

Suggested Revision: Revise the last paragraph on page A 48 of the TMDL to state: The San Diego Water Board may issue subsequent investigative orders to confirm items in the BLRPs or CLRPs. The BLRPs or CLRPs must be capable of achieving the WLAs for the bacteria TMDLS. The CLRPs may also include requirements designed to restore the beneficial uses in receiving waters for other impairing pollutants in the watershed, and achieving the goals and objectives of any other water quality improvement projects included in the CLRPs within the time frame of the compliance schedule.

Response: The paragraph referenced by the commenter will be revised as follows:

The San Diego Water Board may issue subsequent investigative orders to confirm items in the BLRPs or CLRPs. The BLRPs or CLRPs must be capable of achieving the WLAs for the bacteria TMDLS; The CLRPs must also be capable of restoring the beneficial uses in receiving waters for other impairing pollutants in the watershed, and achieving the goals and objectives of any other water quality improvement projects included in the ~~BLRPs or~~ CLRPs within the time frame of the compliance schedule.

Comment 149

The process for developing the geometric mean is flawed and should be revised.

The TMDL states that wet weather and dry weather samples will be used together to calculate the wet weather the 30-day geometric mean and that no exceedances of the wet weather 30-day

geometric mean are allowed. This methodology is flawed, 30-day geometric mean should not be applied to wet weather samples but only to the dry weather condition. Moreover, wet weather and dry weather samples should not be combined to calculate the 30-day geometric mean. The City therefore requests that the TMDL be revised to remove the 30-day geometric mean requirement.

Suggested Revision: Revise the method by which the City will be required to calculate the 30-day geometric mean so that the calculation method does not mix wet weather and dry weather data.

Response: Please see response in Section 2.7.1.

Comment 150

The TMDL compliance timelines need to be revised.

When the Regional Board originally adopted this TMDL in December 2007, the compliance timeline for achieving wet weather TMDLs was 20 years. In the currently proposed revised TMDL, the compliance timeline has been cut in half to 10 years for all water bodies except Chollas Creek. The TMDL and Tentative Resolution state That if dischargers submit a Comprehensive Load Reduction Plan (CLRP) addressing multiple constituents in addition to bacteria, the compliance timeline may be extended to 20 years for achievement of wet weather TMDLs only_ There is no allowance for a timeline longer than 10 years for achieving the dry weather TMDLs. It is unclear why the compliance timeline for wet weather has been shortened to 10 years for most water bodies. Given the scale, complexity, and cost of the structural and non-structural solutions that will be needed to reduce bacteria loads to the required levels, 20 years is an aggressive timeline to expect compliance with either wet or dry weather TMDLs. The TMDL should be revised to allow for a 20-year compliance timeline for achievement of both wet and dry weather TMDLs.

Suggested Revision: Revise the TMDL to allow for a 20-year compliance timeline for the achievement of both wet and dry weather TMDL's.

Response: Please see response to Comment 80.

Comment 151

Delisted water bodies, and delisting candidate water bodies should be removed from the TMDL

If adopted, the TMDL will apply to a number of water bodies that are either not on the current Clean Water Act 303(d) list, or are candidates for delisting. Including these water bodies in the TMDL will require resources to be allocated to plan implementation, plan development, and bacteria monitoring. It is the Cities belief that resources used for TMDLs should be directed to where waters are impaired. Moreover, including delisted water bodies in the TMDL would appear to violate the Clean Water Act.

Section 303(d) of the Clean Water Act requires the State to develop a list of those water bodies for which the effluent limitations required by the CWA are not stringent enough to implement the applicable water quality objective. (33 USC § 1313(d)(1)(A).) Section 303(d) further requires the State to establish a priority ranking for these water bodies, taking into account the severity of

the pollution and the uses to be made of such waters. (Id.) Lastly, Section 303(d) requires the State to establish, and in accordance with their respective priority rankings, the total maximum daily load "for the waters identified in" the 303(d) list. The Clean Water Act does not allow for the development of TMDLs that are not on a 303(d) list.

Practically speaking any water bodies that are not on the 303(d) list, or are candidates for delisting from the 303(d) list should be removed from the TMDL. There is no reason to impose monitoring and other program related costs on dischargers for water bodies that are not impacted for bacteria. Including these water bodies in the TMDL would represent an abuse of discretion on the part of Regional Board. To avoid this outcome the City requests that the Regional Board remove from the TMDL, specifically the table on page A12, those water bodies that are not listed on the current 303(d) list for the San Diego Region, or are candidates to be removed from the list.

Suggested Revision: Remove all water bodies that are not listed on the current 303(d) list for the San Diego Region, or are candidates to be removed from that list from the TMDL.

Response: Please see response in Section 2.1.

Comment 152

Water Code Section 13241 factors were not adequately considered.

The Regional Board has not considered the factors required by California Water Code sections 13000, 13241, and 13262. Any time the Regional Board amends its Basin Plan, it must consider the following factors:

- (a) Past, present, and probable future beneficial uses of water.
 - (b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.
 - (c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.
 - (d) Economic considerations.
 - (e) The need for developing housing in the region.
 - (f) The need to develop and use recycled water.
- (Cal. Water Code § 13241.)

To date, the Regional Board has failed to conduct an adequate analysis of the factors listed in Water Code section 13241, including the economic impacts to the City. As a result, the Regional Board has failed to fully consider the economic costs associated with the TMDL. The TMDL's only findings on economic impacts are as follows:

- 35. **Economic Analysis:** The San Diego Water Board has considered the costs of the reasonably foreseeable methods of compliance with the load and wasteload allocations specified in these TMDLs. These compliance methods involve implementation of structural and non-structural controls. Surface water monitoring to evaluate the effectiveness of these controls will also be necessary.

Additional analysis in the TMDL Technical Report and other Appendices are minimal and do not explicitly recognize that some form of diversion and treatment will be required to meet the zero discharge limitations for dry weather flows. Region- wide, costs associated with compliance with the new TMDL are likely to run into the hundreds of millions of dollars. Before the Regional Board imposes this obligation on the public, it needs to openly consider direct economic costs placed on discharger, including the City.

The purpose of Water Code section 13241 is to ensure that the public has an opportunity to have an honest, open discussion about the ramifications, costs, and benefits of a Regional Board's decision to modify Basin Plan requirements. The far reaching nature of the TMDL is just one example of why such factors need to be considered and discussed openly. Sidestepping these considerations not only violates Section 13241 but more importantly denies the public opportunity to determine what ramifications the TMDL could have for the region. The TMDL should therefore include a more in-depth analysis the economic costs the TMDL will impose on the dischargers, including the cost of designing, implementing and maintain permanent BMPs that extract and treat surface water for The TMDL should also give greater consideration to the present, and probable future beneficial uses of water bodies subject to the TMDL. As stated above, many inland surface water bodies are to the same bacteria standards as heavily used public beaches, despite the fact that they are not currently, and are unlikely to ever be used in manner.

Suggested Revision: Revise the TMDL and its associated technical report to include a more in-depth analysis of the economic costs the TMDL will impose on the dischargers, including the cost of designing, implementing, and maintaining permanent BMPs that extract and treat surface water for bacteria, and to give greater consideration to the present, and probable future beneficial uses of water bodies subject to the TMDL.

Response: Please see responses to Comment 10 and in Section 2.5.

4.11 City of Vista

Comment 153

In the San Marcos HA, the City of Vista, as well as several other Copermittees, is listed as Responsible Parties. In this HA, the impairment is entirely within one jurisdiction and the responsibility for compliance and development of implementation plans should rest with that jurisdiction. As drafted, this table includes many jurisdictions that do not contribute drainage to the impaired water body. The table referenced is on page A59-62 of the draft resolution. The City respectfully requests that the Responsible Parties listed in the table be verified for accuracy prior to adoption.

Response: We reviewed of the municipalities located within the San Marcos HA. The City of Oceanside, the City of Solana Beach, and the City of Vista will be removed from the list of Responsible Municipalities on pages A61 of the draft Basin Plan amendment, and page 130 of the draft Technical Report.

4.12 County of Orange

Comment 154

Tentative Resolution No. R9-2010-001, page 3, section 7. Relationship Between Bacteria and Pathogens, second sentence should be revised as follows: “Humans may be exposed to these waterborne pathogens through recreational water use or by harvesting and consuming filter-feeding shellfish in waters impacted by human sewage. Bacteria have been historically used as indicators of human sewage and associated pathogens because 1) the presence of pathogens and the probability of disease are directly correlated with the density of indicator bacteria in waters used for recreation or shellfish harvesting in waters known to be impacted by human sewage...”

Response: The suggested revisions are appreciated, but current text is accurate.

Comment 155

Tentative Resolution No. R9-2010-001, page 6, section 15. Bacteria Impaired Waters Included in Revised Bacteria TMDLs Project I Table and Attachment A, page A1 table: The table should be revised to include the specific areas of impairment designated in the original 2002 Clean Water Act §303(d) list as shown below:

| Watershed | Type of Listing | Waterbody Name ^a | Number of Listings | Impairment located at |
|-----------------------------|-----------------|------------------------------------|--------------------|--|
| Lower San Juan HSA (901.27) | Creek | Aliso Creek | 3 | |
| | Estuary | Aliso Creek (mouth) | | |
| | Shoreline | Pacific Ocean Shoreline, Aliso HSA | | <i>North Beach Creek, San Juan Creek (large outlet), Capistrano Beach, South Capistrano Beach at Beach Road.</i> |

Response: Please see the response to Comment 11.

Comment 156

Tentative Resolution No. R9-2010-001, page 6, section 15. Bacteria Impaired Waters Included in Revised Bacteria TMDLs Project I; and Attachment A, page A1, second paragraph should be revised as follows: “...The TMDLs that have been developed for the Pacific Ocean shorelines are ~~assumed to be~~ applicable to all the beaches located on the shorelines of areas which were designated as and remain impaired in the hydrologic subareas (HSAs), hydrologic areas (HAs), and hydrologic units (HUs) listed above. It is recognized that several shoreline areas have been recommended for de-listing in the 2008 Clean Water Act Sections 305(b) and 303(d) Integrated Report for the San Diego Region approved by the San Diego Water Board on December 16, 2009. As long as water quality objectives are met at shoreline locations, these TMDL requirements will not apply and compliance and monitoring will be maintained through NPDES Permits and Waste Discharge Requirements.

Response: Please see the response to Comment 6.

Comment 157

Tentative Resolution No. R9-2010-001, page 9, section 19. Sources of Bacteria, second paragraph, 4th sentence should be revised as follows: "...~~Some~~ Some discharges of bacteria from the Municipal MS4s, Caltrans, and Agriculture land use categories are assumed to be anthropogenic in origin and considered controllable. Some discharges from the Municipal MS4s may result from natural sources and transported through pipes and conveyance channels via infiltrating groundwater and are not considered controllable."

Response: The suggested revisions are appreciated, but current text is accurate.

Comment 158

Tentative Resolution No. R9-2010-001, page 10, section 22. Allocation of TMDLs to Point Sources and Nonpoint Sources, second paragraph should be revised as follows: "~~For~~ When the dry weather TMDLs were originally calculated, a major underlying assumption is was that there is no discharge of surface runoff, thus no discharge of bacteria, expected from land uses associated with the Caltrans, Agriculture, and Open Space land use categories during dry weather. Because no discharge of surface runoff is was expected from these land use categories during dry weather, they were assigned dry weather WLAs and LAs of zero. The dry weather TMDLs were assigned entirely to the Municipal MS4s land use category as dry weather WLAs, meaning only discharges of bacteria loads to the receiving waters are expected or allowed from the Municipal MS4s land use category during dry weather."

Response: The suggested revisions are appreciated, but current text is accurate.

Comment 159

Tentative Resolution No. R9-2010-001, page 13, section 29 should be revised as follows: "Compliance with WLAs and LAs: Ultimately, the TMDLs in the receiving waters will be met when the dischargers responsible for controllable sources meet their assigned WLAs and LAs and natural sources of bacteria and resulting exceedances are accounted for. When all discharges from controllable sources meet their assigned WLAs and LAs, the beneficial uses in the receiving waters should be restored and compliance with the TMDLs should be achieved. The TMDLs are calculated based on numeric targets consisting of the numeric bacteria REC-1 WQOs and allowable exceedance frequencies. Discharges from controllable sources that can meet the numeric bacteria REC-1 WQOs and allowable exceedance frequencies in their effluent are not expected to cause exceedances of the numeric targets in the receiving waters. However, exceedances may occur from natural sources in wet and dry weather. The Southern California Coastal Water Research Project (SCCWRP) has produced technical reports examining dry weather fecal indicator bacteria levels in natural reference creeks throughout Southern California from May 2006 – May 2007. Findings include a total of 18.2% of the fecal indicator bacteria samples from the sites exceeded daily (single sample) water quality standards and a total of 39% of enterococcus samples exceeded the 30-day geomean objectives. If the TMDLs are attained in the receiving waters, the assumption will be that the controllable sources are in compliance with their assigned WLAs and LAs. Otherwise, the dischargers responsible for controllable sources of bacteria must provide evidence and demonstrate to the San Diego Water Board that their discharges are not causing exceedances of the numeric WQOs and allowable exceedance frequencies in the receiving waters."

Response: The suggested revisions are appreciated, but current text is accurate. Please see the response to Comment 2.

Comment 160

Tentative Resolution No. R9-2010-001, page 15, section 35. Economic Analysis: The section should indicate whether the San Diego Water Board considers the estimated \$50,000 - \$973,000,000 to treat 10% of a watershed reasonable and acceptable. Even the cursory economic analysis that was conducted for this TMDL predicts astronomical costs of compliance given the modeled reductions needed for dry and wet weather.

Response: The suggested revision is appreciated, but current text is accurate.

Comment 161

Attachment A, page A14, footnote 5 should be revised as follows: “Available water quality data from the San Diego Reference Systems when the TMDL modeling was conducted indicated that exceedences of the single sample WQO during dry weather conditions were uncommon. Furthermore, it was assumed if the exceedence of the single sample WQOs during dry weather is was unlikely, exceedences of the geometric mean are were even more unlikely. Subsequently the Southern California Coastal Water Research Project (SCCWRP) has produced technical reports examining dry weather fecal indicator bacteria levels in natural reference creeks throughout Southern California from May 2006 – May 2007. Findings include a total of 18.2% of the fecal indicator bacteria samples from the sites exceeded daily (single sample) water quality standards and a total of 39% of enterococcus samples exceeded the 30-day geometric objectives. Data from the two studies clearly show that a 0 percent allowable exceedance frequency for either the single sample or geometric WQO is not supported by current scientific data.”

Response: The suggested revisions are appreciated, but current text is accurate. Also, please see the response to Comments 2 and 12.

Comment 162

Attachment A, page A15, first paragraph should be revised as follows: “...The “designated beach” usage frequency has the most conservative and protective lowest enterococci REC-1 WQOs in the Basin Plan.” This change is appropriate since the same level of risk protection is provided by each of the enterococcus REC-1 WQOs based on the usage frequency of the location. The standards provide swimmers at low use beaches have the same level of protection as those at high use beaches.

Response: The sentence will be revised in the draft Basin Plan amendment and draft Technical Report as follows:

The “designated beach” usage frequency has the most conservative and protective lowest and most stringent enterococci REC-1 WQOs in the Basin Plan.

Comment 163

Attachment A, page A16; second table, footnote c should be revised as follows: “Total Coliform 30-day geometric mean WQO for REC-1 at beaches and the point in creeks that discharge to

beaches.” This change is appropriate because the Basin Plan does not contain Total Coliform standards for freshwater creeks.

Response: Please see the response to Comment 17.

Comment 164

Attachment A, page A16, (c) Source Analysis should be revised as follows: “In rural and undeveloped areas, bacteria are assumed to be washed off the land surface primarily by wet weather flows directly to surface waters. However, SCCWRP Technical Report 542 examined dry weather fecal indicator bacteria levels in natural reference creeks throughout Southern California from May 2006 - May 2007 and documented exceedences of both single sample and geometric mean REC-1 WQOs when surface flows from precipitation did not occur. Discharges from...”

Response: The suggested revisions are appreciated, but current text is accurate. Also, please see the response to Comment 2.

Comment 165

Attachment A, page A19, (1) Concentration Based TMDLs should be revised as follows: “An allowable exceedence frequency is included as part of the wet weather numeric target...”

Response: The suggested revision is appreciated, but current text is accurate. Also, please see the response in Section 2.7.1.

Comment 166

Attachment A, page A37, (A) Point Sources, Numeric Targets, third bullet should be revised as follows: “The numeric targets for dry weather TMDLs consist of the REC-1 30-day geometric mean WQOs and a 0 percent allowable exceedence frequency. In 2007 SCCWRP produced technical reports examining dry weather fecal indicator bacteria levels in natural reference creeks throughout Southern California from May 2006 – May 2007. Findings include a total of 18.2% of the fecal indicator bacteria samples from the sites exceeded daily (single sample) water quality standards and a total of 39% of enterococcus samples exceeded the 30-day geomean objectives. Data from the two studies clearly show that a 0 percent allowable exceedance frequency for either the single sample or geomean WQO is not supported by current scientific data and an allowable exceedence frequency for dry weather WQOs should be considered.”

Response: The suggested revision is appreciated, but current text is accurate. Also, please see the responses to Comments 2 and 58, and in Section 2.3.

Comment 167

Attachment A, page A41, first paragraph should be revised as follows: “The available data reported by the Phase I MS4s and the results of the technical TMDL analysis indicate that discharges into and from MS4s are may be in violation of the discharge prohibitions and receiving waters limitations above if said discharges come from controllable anthropogenic sources. It has yet to be determined what portion of discharges into and from MS4s originate from natural, uncontrollable sources and processes.”

Response: The suggested revisions are appreciated, but current text is accurate.

Comment 168

Attachment A, page A41, last bullet should be revised as follows: “Compliance schedule for Phase I MS4s to attain, to the maximum extent practicable (MEP), the MS4 WLA and TMDLs in the receiving waters.”

Response: The suggested revision is appreciated, but current text is accurate.

Comment 169

Attachment A, page A41, last paragraph should be revised as follows: “The Phase I MS4s will be required to submit Bacteria Load Reduction Plans (BLRPs) or Comprehensive Load Reduction Plans (CLRPs) outlining a proposed BMP program that will, to the MEP, be capable of achieving the necessary load reductions required to attain the TMDLs in the receiving waters...”

Response: The suggested revision is appreciated, but current text is accurate.

Comment 170

Attachment A, page A42, first paragraph should be revised as follows: “Ideally, the Phase I MS4s and Caltrans will develop and coordinate the elements of their BLRPs and CLRPs together in watersheds where both entities contribute to the water quality problem.”

Response: The suggested revision is appreciated, but current text is accurate.

Comment 171

Attachment A, page A44, 4th paragraph should be revised as follows: “Because POTWs and wastewater collection systems have been assigned WLAs of zero, no discharges of bacteria are expected or allowed under the wet weather TMDLs or dry weather TMDLs. If discharges of bacteria from POTWs and/or wastewater collection systems do occur as a result of sanitary sewer overflows and result in WQO exceedences, these exceedences will not apply to other dischargers compliance status.” This change is appropriate because it is reasonably foreseeable that accidental discharges from POTWs and/or wastewater collection systems may occur and the resulting WQO exceedences should not contribute to findings of non-compliance of dischargers unrelated to the POTW or wastewater collection system.

Response: The revisions will be made as suggested by the commenter.

Comment 172

Attachment A, page A50, (i) Monitoring for TMDL Compliance and Compliance Assessment, second sentence should be revised as follows: “When all discharges from controllable sources meet their assigned WLAs and LAs, natural sources of bacteria are accounted for, and the numeric targets...”

Response: The suggested revision is appreciated, but current text is accurate.

Comment 173

Attachment A, page A50, (i) Monitoring for TMDL Compliance and Compliance Assessment, first bullet should be revised as follows: “If exceedences of the receiving water limitations are observed in the monitoring data, additional monitoring locations, or other source identification tools ~~must~~ may be added to identify the sources causing the exceedences, if the cause is unknown. An adequate number of additional monitoring locations and frequency of monitoring must be added to identify the sources causing the exceedences in the receiving water. The additional monitoring locations or other source identification tools ~~must~~ may also be used to demonstrate that the bacteria loads from the sources identified have been addressed and are no longer causing exceedences in the receiving waters.

Response: The text referenced by the commenter will be revised in the draft Basin Plan amendment and draft Technical Report as follows:

If exceedences of the receiving water limitations are observed in the monitoring data, additional monitoring locations and/or other source identification methods must be added implemented to identify the sources causing the exceedences. ~~An adequate number of additional monitoring locations and frequency of monitoring must be added to identify the sources causing the exceedences in the receiving waters.~~ The additional monitoring locations and/or other source identification methods must also be used to demonstrate that the bacteria loads from the identified sources have been addressed and are no longer causing exceedences in the receiving waters.

Comment 174

Attachment A, page A50, (i) Monitoring for TMDL Compliance and Compliance Assessment, second bullet should be revised as follows: “If exceedences of the receiving water limitations are observed in the monitoring data, additional monitoring locations, or other source identification tools ~~must~~ may be added to identify the sources causing the exceedences, if the cause is unknown. An adequate number of additional monitoring locations and frequency of monitoring must be added to identify the sources causing the exceedences in the receiving water. The additional monitoring locations or other source identification tools ~~must~~ may also be used to demonstrate that the bacteria loads from the sources identified have been addressed and are no longer causing exceedences in the receiving waters.

Response: Please see the response to Comment 173.

Comment 175

Attachment A, page A50, (i) Monitoring for TMDL Compliance and Compliance Assessment, third bullet: “Wet weather monitoring following two storms per rainy season (i.e., October 1 through April 30) should occur at least once within 24 hours of the end of athe storm event ~~that occurs during the rainy season (i.e., October 1 through April 30).~~

Response: Please see the response to Comment 66.

Comment 176

Attachment A, page A53, first paragraph should be revised as follows: “Discharges from other sources (i.e., Caltrans, Agriculture, POTWs, Wastewater Collection Systems, and Open Spaces) during dry weather are not expected and/or not allowed (i.e., WLA = 0 or LA = 0). If discharges of bacteria from these sources do occur and result in WQO exceedences, these exceedences will not apply to other dischargers (i.e., MS4s) compliance status.”

Response: The paragraph referenced by the commenter will be revised in the draft Basin Plan amendment and draft Technical Report as follows:

Because the dry weather TMDLs are assigned entirely to the Municipal MS4s as WLAs, the Municipal MS4s are assumed to be the only source of bacteria during dry weather (i.e., dry weather TMDL = MS4 WLA). Discharges from other controllable sources (~~i.e.e.g.~~, Caltrans, Agriculture, ~~and Open Spaces~~) during dry weather are not expected and/or not allowed (i.e., WLA = 0 or LA = 0). If at the end of the dry weather TMDL compliance schedule the receiving waters exceed the 30-day geometric mean REC-1 WQOs more than 0 percent of the time, the municipal Phase I MS4s are responsible for demonstrating their discharges into the receiving waters are not causing the exceedences, or they will be considered out of compliance. If controllable sources other than the Phase I MS4s are identified as causing the exceedences, the Phase I MS4s will not be considered out of compliance.

Comment 177

Attachment A, page A53, 2. Compliance with Wet Weather TMDLs, first paragraph should be revised as follows: “At the end of the wet weather TMDL compliance schedule, the bacteria densities in the receiving waters for all wet weather days cannot exceed the single sample maximum REC-1 WQOs more than the allowable exceedence frequency. ~~In addition, the bacteria densities must be less than or equal to the 30-day geometric mean REC-1 WQOs 100 percent of the time (i.e., both dry and wet weather days in a 30-day period shall not exceed the 30-day geometric mean REC-1 more than 0 percent of the time).~~” This change is appropriate because wet weather TMDL compliance is based upon an allowable 22% single sample exceed frequency not the 30 day geometric mean with no exceedence frequency.

Response: Please see the response in Section 2.7.1.

Comment 178

Attachment A, page A54, third paragraph should be revised as follows: “If controllable sources other than discharges from the municipal Phase I MS4s are identified before or after the end of the wet weather TMDL Compliance Schedules as causing the exceedences, the identified exceedences will not apply to the MS4s compliance status, and those controllable sources will be responsible for reducing their bacteria loads and/or demonstrating that discharges from those sources are not no longer causing the exceedences.”

Response: The suggested revision is appreciated, but current text is accurate. Also, please see the response to Comment 176.

Comment 179

Attachment A, page A54, fourth paragraph should be revised as follows: "...Progress can be demonstrated with reductions in exceedence frequencies in the receiving water, reductions in flows to the receiving water, iterative implementation of BMPs or other metrics, until the allowable exceedence frequencies ultimately are achieved at the end of the TMDL Compliance Schedules."

Response: The suggested revision is appreciated, but current text is accurate. Also, please see the response to Comment 69.

Comment 180

Attachment A, page A54, 1. Measuring Progress Toward Attaining Dry Weather TMDLs: "For the dry weather TMDLs, available historical monitoring data from the year 2002 ~~to the effective date of these TMDLs~~ should be used to calculate the "existing" dry weather exceedence frequency of the 30-day geometric mean REC-1 WQOs for each watershed." Calculating the "existing" dry weather exceedence frequency with data beyond 2002 will wipe out any recognition of the progress and iterative BMPs achieved under MS4 programs and other watershed initiatives from 2003 to the present. The County and cities have been working diligently on reducing bacteria loads from the initial 303(d) listings and deserve the compliance credit and recognition of these efforts and the related significant financial investment.

Response: Please see the response to Comment 141.

Comment 181

Attachment A, page A57, (j) TMDL Compliance Schedule, first paragraph, last sentence should be revised as follows: "After the controllable sources achieve their assigned WLAs and LAs and natural sources of bacteria are accounted for, the TMDLs in the receiving waters will be met and beneficial uses restored.

Response: The suggested revision is appreciated, but current text is accurate.

Comment 182

Attachment A, page A57, (j) TMDL Compliance Schedule, second paragraph, first sentence should be revised as follows: "Until the dischargers achieve their assigned WLAs and LAs and natural sources of bacteria are accounted for, the beneficial uses of the waterbodies addressed by this project will likely remain impaired, ~~and the dischargers will continue violating one or more Basin Plan waste discharge prohibitions~~.

Response: The suggested revisions are appreciated, but current text is accurate.

Comment 183

Attachment A, page A65, first paragraph, second sentence should be revised as follows: "Several of the segments or areas in the list aboveThe following segments or areas have been proposed for delisted delisting for one or more indicator bacteria species or redefined in the 2008 303(d) List by the San Diego Water Board:
Pacific Ocean Shoreline, San Joaquin Hills HSA, at Crescent Bay Beach

Pacific Ocean Shoreline, Laguna Beach HSA, at Bluebird Canyon
Pacific Ocean Shoreline, Laguna Beach HSA, at Dumond Drive at Victoria Beach
Pacific Ocean Shoreline, Laguna Beach HSA, at Laguna Beach at Cleo Street
Pacific Ocean Shoreline, Laguna Beach HSA, at Laguna Beach at Laguna Hotel
Pacific Ocean Shoreline, Laguna Beach HSA, at Laguna Beach at Main Beach
Pacific Ocean Shoreline, Aliso HSA, at Aliso Beach –middle
Pacific Ocean Shoreline, Aliso HSA, at Aliso Beach –north
Pacific Ocean Shoreline, Aliso HSA, at Blue Lagoon
Pacific Ocean Shoreline, Dan Point HSA, at Aliso Beach at West Street
Pacific Ocean Shoreline, Dan Point HSA, at Dana Strands Surfzone at Dana Strands Rd
Pacific Ocean Shoreline, Dan Point HSA, at Salt Creek outlet at Monarch Beach
Pacific Ocean Shoreline, Dan Point HSA, at South of Salt Creek outlet at Salt Creek Service Road
Pacific Ocean Shoreline, Dan Point HSA, at Table Rock
Pacific Ocean Shoreline, Dan Point HSA, at Thousand Steps Beach
Pacific Ocean Shoreline, Lower San Juan HSA, at North Beach Creek
Pacific Ocean Shoreline, San Clemente HA, at Capistrano Shores at North Ole Hanson Beach
Pacific Ocean Shoreline, San Clemente HA, at Riviera Beach
Pacific Ocean Shoreline, San Clemente HA, at San Clemente City Beach at Linda Lane
Pacific Ocean Shoreline, San Clemente HA, at San Clemente City Beach at Mariposa Lane
Pacific Ocean Shoreline, San Clemente HA, at San Clemente City Beach at Pier
Pacific Ocean Shoreline, San Clemente HA, at San Clemente City Beach at South Trafalgar St Beach
Pacific Ocean Shoreline, San Clemente HA, at San Clemente City Beach at South Trafalgar Canyon outlet
Pacific Ocean Shoreline, San Clemente HA, at South Capistrano Beach at Beach Road
Pacific Ocean Shoreline, San Clemente HA, at South Capistrano County Beach

“...also include delist segments in San Diego County.

Response: Please see the response in Section 2.1. The paragraph referenced by the commenter will be revised in the draft Basin Plan amendment and draft Technical Report as follows:

~~Beginning with the 2008 303(d) List, specific beach segments of the Pacific Ocean shoreline are listed individually, and may not be identified in the same way as those segments listed in the table above. Several of the segments or areas in the list above have been delisted or redefined in the 2008 303(d) List. In addition, other segments or areas have been added to the Pacific Ocean shorelines listed above.~~ The TMDLs that address the Pacific Ocean shorelines identified in the 2002 303(d) List are ~~assumed to be~~ applicable to all the beaches located on the shorelines of the hydrologic subareas (HSAs), hydrologic areas (HAs), and hydrologic units (HUs) listed above, or as listed individually in the 2008 and future 303(d) Lists. Beginning with the 2008 303(d) List, specific beach segments of the Pacific Ocean shoreline are listed individually. Specific beach segments from some of the Pacific Ocean shorelines listed in the above table have been redefined or delisted from the 2008 303(d) list that was approved by the San Diego Board on December 16, 2009.

Comment 184

Attachment A, page A65, first paragraph, last sentence should be revised as follows: “The TMDLs that address the creeks and Pacific Ocean shorelines identified in the 2002 303(d) List are assumed to be applicable to all the beaches ~~located on the shorelines of the hydrologic subareas (HSAs), hydrologic areas (HUs), and hydrologic units (HUs) listed above, or~~ as listed individually in the 2008 and future 303(d) Lists.

Response: Please see the response to Comment 183.

Comment 185

Attachment A, page A70, (k) TMDL Implementation Milestones table: revise the date ~~As needed after effective date~~ to “5 years after effective date” for the following Implementation Actions:

14. Amend discharge conditions of appropriate waivers to be consistent with the requirements for complying with the TMDLs and Agriculture LAs;
15. Issue individual or general WDRs or Basin Plan prohibitions consistent with the TMDLs and LAs for controllable nonpoint sources discharges not eligible for conditional waivers;
17. Enroll Phase II MS4s identified as significant sources of bacteria to receiving waters under State Water Board general WDRs and NPDES requirements;
18. Issue individual or general WDRs and NPDES requirements consistent with the TMDLs and WLAs for specific Phase II MS4s or category of Phase II MS4s;
19. Take enforcement actions against controllable point sources and nonpoint sources to attain compliance with the WLAs and LAs.

These changes are appropriate since the assumption that the MS4s are the largest discharger of bacteria has been made based on the MS4s being the only dischargers currently required to submit monitoring data for their dischargers. A timely commitment to investigate and address discharges from known entities, such as Phase II MS4s and Agriculture is needed to ensure that TMDL reductions and timelines are met.

Response: The suggested revisions are appreciated, but current text is appropriate. Also, please see the response in Section 2.6.

Comment 186

Draft Technical Staff Report (TSR), Section 1 Executive Summary, page 4, 5th paragraph, 1st line states: “For the dry weather TMDLs, the discharges and bacteria loads from land uses associated with CalTrans, Agriculture and Open Space land uses are expected to be zero. This is because there is no flow source that is expected during dry weather to wash off of these land uses.” And Draft TSR, Section 1 Executive Summary, page 6, Numeric Targets 3rd bullet: “The numeric targets for dry weather TMDLs consist of the REC-1 30-day geometric mean WQOs and a 0 percent allowable exceedence frequency.” These statements are not supported by current scientific studies completed by SCCWRP. See comments 6, 8, 11, and 13 above. All references to a 0 percent allowable exceedence frequency in dry weather should be removed.

Response: Please see the responses to Comments 2 and in Sections 2.3 and 2.7.1.

Comment 187

Draft TSR, Section 1 Executive Summary, page 7, Allocations 6th bullet: The assumption that there is no runoff from agricultural land is unsupported and highly suspect give practical experience.

Response: Please see the responses to Comment 4 and in Section 2.4.

Comment 188

Draft TSR, Section 1 Executive Summary, page 7, Allocations 7th bullet #1: Just because a source is subject to regulation does not mean that it is controllable.

Response: If a source is subject to regulation, it implies a source is anthropogenic. Sources of bacteria that are anthropogenic are due to some human activity that can be controlled. If those anthropogenic sources are currently uncontrolled, that does not mean they cannot be controlled.

Comment 189

Draft TSR, Section 1 Executive Summary, page 8, Load Reductions, 1st paragraph states: “The WQBELs will likely consist of receiving water limitations (based on the numeric targets) and require the implementation of a BMP program to achieve the TMDLs in the receiving waters....Ideally, the Phase I MS4s and CalTrans will develop and submit their BLRPs or CLRPs together.” This is a significant revision from the previous version of the TMDL and from the assurances given to members of the Stakeholder Advisory Group that the WQBELs would consist of an iterative BMP program.

Response: Please see the responses to Comment 69 and in Section 2.7.1.

Comment 190

Draft TSR, Section 2 Introduction, page 16, 3rd paragraph – The text should include a discussion of the Natural Sources Exclusion.

Response: The suggested revision is appreciated, but current text is accurate.

Comment 191

Draft TSR, Section 3, Problem Statement, pg 21 – “The listing of Pacific Ocean shorelines on the 2002 303(d) List are assumed to be applicable to all beaches located on the shorelines of the HSAs and HAs listed above”. This assumption is baseless. The 2002 list specifically indicated the beaches that are impaired. This assumption is also inconsistent with the Stormwater Monitoring Coalition recommendations for the limited coastal area representative of coastal monitoring locations.

Response: Please see the responses to Comment 6 and in Section 2.1.

Comment 192

Draft TSR, Section 4 Numeric Target Selection, pg 32 states: “The natural sources exclusion approach can only be used to account for exceedences of bacteria WQOs after the responsible dischargers demonstrate that all anthropogenic sources have been *eliminated*...” In next

paragraph the text states "...the natural sources exclusion approach also requires *control* of indicator bacteria from anthropogenic sources..." (emphasis added). It is our understanding from discussions with Deborah Jayne your staff that the Natural Sources Exclusion Approach requires control, not elimination of anthropogenic sources. The text should be revised accordingly.

Response: The sentence referenced by the commenter will be revised as follows:

The natural sources exclusion approach can only be used to account for exceedances of bacteria WQOs after the responsible dischargers demonstrate they have implemented all appropriate BMPs to control all anthropogenic sources of indicator bacteria to the target water body such that they do not cause or contribute to exceedances of the indicator bacteria WQOs that all controllable anthropogenic sources have been eliminated, typically after a bacteria TMDL has already been adopted and implemented.

Comment 193

Draft TSR, Section 11 Implementation Plan, page 147, bottom paragraph should be revised as follows: "Existing dischargers ~~are~~ may be violating one or more of these Basin Plan prohibitions.

Response: The suggested revision is appreciated, but current text is accurate.

4.13 County of San Diego

Comment 194

A stronger commitment to and timeline for future TMDL revisions are necessary.

The TMDL recognizes that revisions to the Basin Plan may be necessary in the future (page A49). However, because this TMDL is founded on several critical assumptions, and because studies with bearing on these assumptions are either planned, ongoing, or already complete, stronger language should be included in the Basin Plan amendment to require a more specific commitment to and timeline for revising the TMDL to ensure that it is consistent with the most current science and available data from the San Diego region.

Proposed Changes: A paragraph should be added at the end of Chapter 7 Section (f)(7) of the proposed Basin Plan amendment (page 450) stating: "Any study conducted following the procedures outlined in this paragraph will be considered by the San Diego Water Board during the time period specified in Table (Insert Table Number) TMDL Implementation Milestones".

A row should be added to the TMDL Implementation Milestones Table (page 469) to state:

- **Implementation Action:** San Diego Water Board will reconsider the TMDL to include results of any optional special studies and water quality monitoring data completed by the responsible entities and revise numeric targets, WLAs, LAs and the implementation schedule as needed.
- **Responsible Parties:** San Diego Water Board
- **Date:** Within five years of the effective date of the TMDL or within one year of receipt of final study results, whichever is later

Response: Please see the response in Section 2.6.

Comment 195

Compliance monitoring under the TMDL should not be the sole responsibility of Phase I MS4s.

The entire compliance monitoring burden under the TMDL has been placed on Phase I MS4 dischargers, including monitoring necessary to identify the contributions of non-Phase I MS4 dischargers, some of which are even assigned wasteload allocations (WLAs) or load allocations (LAs) under this TMDL (i.e., Caltrans and agriculture). (see pages A50-454).

Proposed Changes: At a minimum, the paragraph beginning "Because the Phase I MS4s are located at the base of the watersheds ..." should be written to specify that all dischargers assigned WLAs and LAs under this TMDL are required to participate in compliance monitoring.

Response: Please see the responses to Comment 79 and in Section 2.7.2.

Comment 196

The definition of a rain event should be changed from 0.2 inch to 0.1 inch.

Data from a study at Leo Carrillo Beach (a reference watershed in Los Angeles County) are used to establish a frequency at which beaches and creeks covered by this TMDL can exceed bacteria water quality objectives during wet weather (22%). Allowable exceedance frequencies are appropriate in this TMDL because numerous studies have found that even reference watersheds unimpacted by anthropogenic activities sometimes exceed bacteria water quality objectives. Exceedance frequencies at Leo Carrillo Beach were calculated based on wet weather days defined as rainfall events of at least 0.1 inch and the following 72 hours. This TMDL defines wet weather days as rainfall events of 0.2 inches or greater and the following 72 hours. It is scientifically invalid to apply the wet weather exceedance frequency observed at Leo Carrillo Beach to this TMDL, which uses a different definition of wet weather. The exceedance frequency for rainfall events greater than 0.2 inches is unknown, but likely to be different than 22%.

Proposed Changes: Wet weather days in this TMDL should be defined as any rain event 0.1 inch or greater and the following 72 hours. This will ensure consistency with the Leo Carrillo Beach reference study.

Response: Please see the response in Section 2.2.

Comment 197

The TMDL should not require compliance with total coliform water quality objectives in creeks or inland waterways.

The TMDL states that wet and dry weather numeric objectives for total coliform apply at the point in a creek that discharges to a beach, bay, or estuary. The San Diego Basin Plan does not contain total coliform water quality objectives applicable to inland surface waters, only to marine waters.

Proposed Changes: Language throughout the Resolution, Basin Plan Amendment, and Technical Report should be reviewed and changed to correctly state that total coliform water quality objectives are not applicable in inland surface waters, only at the point in creeks where continual mixing with salt water occurs.

Response: Please see the response to Comment 17.

Comment 198

The TMDL should include allowable exceedance frequencies for dry weather similar to those established for wet weather.

This TMDL allows no exceedances of bacteria water quality objectives during dry weather days (defined as days with less than 0.2 inch of rainfall observed on each of the previous 3 days). In other TMDLs where Leo Carrillo Beach is used as a reference system (i.e., Santa Monica Bay Beaches Bacteria TMDL), the dry weather TMDL is split into two seasons: summer dry (0% allowable exceedance frequency) and winter dry (3% allowable exceedance frequency). This is a scientifically sound approach because studies have found that reference beaches and creeks do

sometimes exceed water quality objectives during dry weather. A recent study published by SCCWRP (Tiefenthaler, L. E. Stein and G. Lyon. 2008. Fecal indicator bacteria levels during dry weather from Southern California reference streams. SCCWRP Annual Report, Costa Mesa, CA) confirms that exceedances of bacteria water quality objectives do occur during dry weather conditions in Southern California reference streams, including San Mateo Creek in San Diego County.

Proposed Changes: The TMDL should allow a 3% exceedance frequency during dry weather conditions until a more appropriate frequency can be established based on data collected from a reference system in the San Diego region.

Response: Please see the response in Section 2.3.

Comment 199

The TMDL compliance timelines should be extended.

When the Regional Board originally adopted this TMDL in December 2007, the compliance timeline for achieving wet weather TMDLs was 20 years. In the revised TMDL, the compliance timeline has been cut in half to 10 years for all water bodies except Chollas Creek. It is unclear why this was necessary. The TMDL and Tentative Resolution state that if dischargers submit a Comprehensive Load Reduction Plan (CLRP) that addresses multiple constituents in addition to bacteria, the compliance timeline may be extended to 20 years for achievement of wet weather TMDLs only. However, CLRPs are not defined well enough for dischargers to understand how compliance would be determined if they decide to develop CLRPs. There is no allowance for a timeline longer than 10 years for achieving the dry weather TMDLs.

According to Table 3-1 in the Technical Report, this TMDL is applicable to 1,738 square miles of Orange and San Diego Counties. Since the TMDL has been revised to require compliance with concentration-based water quality objectives, compliance is now potentially enforceable throughout the entire extent of these 1,738 square miles. Given the scale, scope, complexity and cost of the structural and non-structural solutions likely to be needed to reduce bacteria loads to required levels, 20 years is an extremely aggressive compliance timeline and should not be reduced any further. A longer compliance timeline is appropriate in that 20 water bodies are covered under this TMDL. Most TMDLs cover only one water body. The County of San Diego, for example, will be required to reduce bacteria loads simultaneously in six watersheds.

Proposed Changes: The TMDL should be revised to allow for a 20-year compliance timeline for achievement of both wet and dry weather TMDLs. (see pages 466-469).

Response: Please see the response to Comment 80.

Comment 200

The TMDL should not require bacteria load reductions or additional monitoring in unimpaired watersheds.

Page A1 of the proposed Basin Plan amendment states: "The TMDLs that have been developed for the Pacific Ocean shorelines are assumed to be applicable to all the beaches located on the shorelines of the hydrologic subareas (HSAs), hydrologic areas (HAs), and hydrologic units (HUs) listed in a table above." This statement implies that all dischargers located anywhere in the San Marcos HA (904.5) will be required to comply with the requirements of the TMDL. In fact, Moonlight Beach is the only segment within the San Marcos HA that is identified as impaired on the 303(d) list.

Moonlight Beach is hydrologically disconnected from the rest of the San Marcos HA. The draft Technical Report recognizes this fact in Table 3-1 where Moonlight Beach is shown to have a total drainage area of only 1.43 square miles. The table on Page 461 goes one step further by listing eight Phase I MS4s as "responsible municipalities" that will be required to comply with TMDL requirements in the San Marcos HA. These eight municipalities represent all of the Phase I MS4s within the Carlsbad HU. The table implies that any Phase I MS4 located anywhere in the Carlsbad HU will be required to comply with the requirements of this TMDL. In fact, the City of Encinitas is the only Phase I MS4 discharger to Moonlight Beach.

Proposed Changes: The City of Encinitas is the only Phase I MS4 that should be assigned responsibility for load reductions and compliance monitoring in the San Marcos HA.

The text and table on page A1 should be revised to state that the TMDL in the San Marcos HA only applies to the 1.43 square mile Moonlight Beach drainage area. All other Phase I MS4s should be removed from the table on Page A61. Regional Board staff should review the other HSA, HA, and HU designations to ensure that monitoring and load reduction activities are not being required for entities discharging to non-impaired water bodies.

Response: Please see the response to Comment 75.

Comment 201

Further clarification is needed regarding how TMDL compliance will be determined.

The TMDL has been revised so that compliance will be determined based on achievement of concentration-based water quality objectives rather than waste load allocations and load allocations. If WLAs and LAs will not be used to determine compliance, why are they included in the TMDL? Also, it is unclear how non-compliance with water quality objectives at a beach will impact upstream dischargers. Currently, it appears that upstream dischargers would be determined to be out of compliance even if they could demonstrate that they are meeting their assigned WLAs or LAs.

Proposed Changes: The 1st paragraph on page A51 should be revised to allow for a determination of compliance if dischargers can demonstrate that they are complying with assigned WLAs and LAs, even if receiving waters are exceeding the applicable water quality objectives.

Response: Please see the response in Section 2.7.1.

Comment 202

Geometric means should not be used to assess TMDL compliance during wet weather.

Item 28 of the Tentative Resolution states: "at the end of the wet weather TMDL compliance schedule, the single sample maximum and 30-day geometric mean REC-I = WQOs must not be exceeded in the receiving water more frequently than the allowable exceedance frequencies."

The proposed Basin Plan amendment (Page A54) states that wet weather and dry weather samples will be used together to calculate the wet weather 30-day geometric mean and that no exceedances of the wet weather 30-day geometric mean are allowed. This methodology is not scientifically defensible. The 30-day geometric mean should not be applied to wet weather samples but only to the dry weather condition. Moreover, wet weather and dry weather samples should not be combined to calculate the 30-day geometric mean.

Proposed Changes: Wet weather compliance should not be assessed using a geometric mean. It is more appropriate to use the single sample maximum since rain events are episodic in nature.

All references to the use of a geometric mean for calculating wet weather compliance should be removed.

Response: Please see the response in Section 2.7.1.

4.14 Heal the Bay

Comment 203

Reference-Based approach (percentage-based) for setting waste load allocations.

Heal the Bay supports using the reference beach approach for determining a 22% allowable exceedance frequency during wet weather and 0% exceedance frequency during dry weather in the Draft TMDL. As noted, this reference system approach was taken in the Santa Monica Bay Beaches Dry and Wet Weather Bacteria TMDLs adopted by the Los Angeles Regional Water Quality Control Board and ensures that bacteriological water quality is at least as good as that of a reference system. However, we do not understand the logic in basing wet weather “exceedances” on REC-1 *single sample* maximums and dry weather exceedances on the REC-1 *geometric mean*. Instead, we urge the Regional Board to use the single sample maximum standards to identify both wet and dry weather allowable exceedances, as is the case with the Santa Monica Bacteria TMDL. So please add the single sample maximum for dry weather as well.

Response: Meeting the single sample maximum will also be a requirement to comply with the dry weather TMDLs. Please see the last sentence of the first paragraph for bullet number 1 on page 118 of the draft Technical Report (and number 1 on page A52 of the draft Basin Plan amendment). Also, please see the response in Section 2.7.1.

Comment 204

Also does the Regional Board plan to develop a reference location within the Region, rather than using Leo Carillo Beach in Los Angeles County? Although the Regions may have some similarities, it would be prudent to develop a site within the Region to account for any differences.

Response: The San Diego Water Board would prefer to have region specific reference locations and allowable exceedance frequencies. Because of the limited resources available to the San Diego Water Board, developing the data required for region specific reference systems will be the responsibility of other entities.

Comment 205

Of note, the implementation strategy based on reducing mass-load is confusing and not protective of human health. It is unclear how monthly (billion MPN/month) and annual (billion MPN/year) loads calculations will help to implement bacteria TMDL compliance. Typically, a few samples a month are collected for beaches and there is rarely flow monitoring of storm drains and creeks. A few grab samples without accurate flow measures are not conducive to determining accurate loading estimates. The approach should be discussed in more detail.

Response: The mass-load based TMDLs were used primarily to identify controllable sources of bacteria that need to reduce their loads to be able to meet the numeric targets (i.e., water quality objectives and allowable exceedance frequencies) in the receiving waters. Because the numeric targets are essentially based on bacteria densities (or concentration) in the receiving waters, attaining the numeric targets in the receiving water should mean compliance with the TMDLs

has been achieved. The assumption is that if the water quality objectives and allowable exceedance frequencies are met in the receiving water, then the controllable sources are meeting their WLAs.

Comment 206

Numeric target objectives should be expanded to include all Ocean Plan Standards.

The Draft TMDL provides only a rolling 30-day geometric mean numeric target for dry weather. However, the Ocean Plan includes a total of seven water quality standards for indicator bacteria. These standards specifically include a rolling 30-day geometric mean for total coliform, fecal coliform, and enterococcus as well as a single sample limit for total coliform, fecal coliform, and enterococcus, in addition to a fecal-to-total coliform ratio. In several instances the Draft TMDL discusses additional bacteria standards (“Compliance with the wet weather TMDLs in the receiving water is based on the frequency that the wet weather days in any given year exceed the wet weather numeric objective, but 30-day geometric mean must also be met.” Draft TDML at A51) but this is not reflected in the numeric targets. When any standard is exceeded, the REC-1 beneficial use is impaired. It is imperative numeric targets include all seven Ocean Plan bacteria standards, for greatest public health protection.

Response: The numeric targets that were selected were primarily used in the modeling and calculation of the mass-load based TMDLs. Compliance with the TMDLs is also based on the numeric targets, but also requires that the other water quality objectives are met. Please see the first paragraphs of numbers 1 and 2 on pages 118 and 119 of the draft Technical Report and bullet numbers 1 and 2 on pages A52 and A53 of the draft Basin Plan amendment.

In terms of measuring compliance with the TMDLs in the receiving waters, concentrations in the receiving waters will be based on the single sample maximum and 30-day geometric mean WQOs an allowable exceedance frequencies. The fecal-to-total coliform ration applies specifically to ocean waters, not creek. All the WQOs in the Ocean Plan must be met in the receiving waters. The total-to-fecal ratio can be included in the implementing orders as part of the receiving water limitations, but it is not specifically discussed in these TMDLs. Also, please see the response in Section 2.7.1.

Comment 207

Numeric limits should not be based on frequency of use.

Frequency of use should not be considered in determining numeric targets. The Draft TMDL states that dischargers’ commented that for impaired creeks the “designated beach” approach may be over protective of water quality, due to infrequent use. Further, the Draft TMDL states, “If sufficient evidence can be provided to the San Diego Water Board that can demonstrate the usage frequency for one or more of the six impaired creeks falls under the “Lightly Used Full Body Contact Recreation” or “Infrequently Used Full Body Contact” usage frequency, the Basin Plan may be amended to designate one or more of the creeks with the “moderately to lightly used area” usage frequency.” Heal the Bay opposes this approach and believes impaired creeks should have the same protection standards, regardless of recreation frequency. This approach does not favor maintaining appropriate water quality standards, and is unacceptable for infrequent bathers

to be subject to deficient public health protection. If the REC-1 use does not exist for particular receiving waters, then a UAA may be performed to change the REC-1 use.

Response: The Basin Plan for the San Diego Region includes multiple numeric water quality objectives for Enterococcus bacteria applicable to creeks, depending on the frequency of use. The different numeric water quality objectives are given for different levels of usage frequency, because the health risk is reduced as the population is reduced. In other words, the health risk remains the same with a higher water quality objective if the frequency of use is reduced. If the frequency of use of a creek can be established as less than the usage frequency for a “designated beach”, then designating the creek as a “moderately to lightly used area” may be appropriate. Before this can happen, a separate Basin Plan amendment with its own public process would be required.

Comment 208

Compliance schedules should be moved forward for final dry and wet weather targets.

The Draft TMDL proposes a final dry and wet weather compliance target date of 10 years, with the option to move the wet weather compliance date to 20 years if a multiple TMDL implementation approach is pursued. The timeframe appears excessive, especially for meeting final dry weather targets. The dry weather period is the most critical period from a public health perspective. The Santa Monica Bay, Marina del Rey and San Pedro Bay Beaches Bacteria TMDLs require final dry weather targets to be met three years after adoption for the AB411 time period and 6 years for winter dry weather. Since this deadline has past, we have seen great improvements in beach water quality in Santa Monica Bay. Many municipalities in Los Angeles County have implemented best management practices such as dry weather diversions and treatment facilities to improve beach water quality. Thus we urge the Regional Board to split the dry weather into two distinct periods (AB411 dry and winter dry) and move the compliance date forward. In addition 20 years is excessive for complying with wet weather WLAs. Heal the Bay would like to see compliance date moved to 18 years which is consistent with the Santa Monica Bay Bacteria TMDL.

Response: The proposed maximum compliance schedules for the final dry and wet weather TMDLs are appropriate for the beaches and creeks that are in the San Diego Region. Also, please see the response to Comment 80.

Comment 209

Enforcement of compliance milestones should be clarified.

Specific milestones for achieving bacteria TMDL compliance should be implemented and enforced by the Regional Board. Multiple milestones, with set compliance dates, should be *required* by the Regional Board for all responsible dischargers. The language in the Draft TMDL waivers on its intent. For instance, the Draft TMDL states both “*if* the TMDL Compliance Schedules include interim milestones” (page A55) and then later provides interim milestones in the tables on page A67. Please provide clarification that milestones are required and identify them specifically in the compliance schedule.

Response: Interim milestones are required in the compliance schedules. The discharges are required to include at least one interim milestone in the compliance schedules proposed in their BLRPs or CLRPs. If the BLRPs or CLRPs do not include proposed compliance schedules, then the compliance schedules and interim milestones that are given in the draft Basin Plan amendment will become the default compliance schedules. Please see the compliance schedule and alternative compliance schedule requirements discussed on pages A66-A68 of the draft Basin Plan amendment.

Comment 210

Monitoring for TMDL compliance.

The TMDL describes compliance monitoring. We urge the Regional Board to include a statement to require point zero monitoring locations. The definition used by Los Angeles County of ‘point zero’ monitoring states, “The term *wave wash* is defined as the point at which the storm drain or creek empties and the effluent from the storm drain initially mixes with the receiving ocean water, this term is also referred to as *point zero*.” Point zero monitoring ensures that the highest levels of indicator bacteria area captured in the sample which is critical for public health protection. People definitely swim and surf directly in front of flowing storm drains and creeks. Additionally, we urge the Regional Board to require that water monitoring during summer months (AB411 period) be conducted at least weekly, for the necessary evaluation of compliance progress.

Response: The draft Basin Plan amendment provides a framework of the minimum monitoring that is expected for determining compliance with the TMDLs. Please see the minimum monitoring requirements discussed on page A50 of the draft Basin Plan amendment. The minimum monitoring locations include locations required under the Phase I MS4 NPDES monitoring requirements and AB411 monitoring locations. These are located within the “point zero” location described by the commenter.

The final monitoring requirements will be determined when the implementing orders (i.e., MS4 NPDES requirements, WDRs, enforcement actions, or investigative orders) are developed. During that time, the public may be given an opportunity to provide additional input on the final monitoring requirements that should be included in the order.

4.15 San Diego Coastkeeper

Comment 211

Incorporation of stakeholder input in developing a local reference system dataset.

In response to comments made by Coastkeeper on May 13, 2008, Regional Board staff indicated that stakeholders would be involved in the determination of which reference systems to use for the final TMDL. Specifically, Board staff indicated that “we will once again engage the stakeholders before final decisions about which reference system to use and throughout the process of calculating the revised TMDL”. We are disappointed the reference system was chosen without SAG input, simply incorporating the Los Angeles Region reference system. However, we are confident adequate data will be collected in the near future, and look forward to working with staff to incorporate it.

Response: Please see the responses to Comment 143, and in Sections 2.2, 2.3, and 2.6.

Comment 212

Direct measurements of human indicators must be incorporated into the process.

Although a watershed may be 95 percent undisturbed, this fact alone does not mean all exceedances of water quality objectives are due to natural sources. In SCCWRPs 2006 study, *Microbiological water quality at non-human impacted reference beaches in southern California during wet weather*, indicators of human sources were found in three instances. The indicator chosen for this study was one that directly measured the presence of human viruses, but would not detect when other human pathogens like bacteria were present. It is likely that if additional direct measures were chosen, more indications of human sources would have been detected. For example, recent research into the human genetic markers of *Bacteroides*, a gastrointestinal bacterium, has already proven useful in tracing human sources of bacteria in coastal and freshwater systems. The *Bacteroides* indicator has been used to detect the presence of human sources in SCCWRPs 2008 study on fecal indicator bacteria levels during dry weather. Thus, we feel it would be an important additional component of any reference watershed analysis. As the process moves forward, staff must normalize the natural exceedance frequency to the underlying human loading in reference systems. This must also entail a source identification analysis to ensure the exceedance frequency is indeed a natural occurrence and not partially related to anthropogenic impacts.

Response: We agree that differentiating between human and non-human sources of bacteria in a reference system would be an important component of a reference watershed analysis. Hopefully, Coastkeeper will be involved in the development of any plan that is developed to identify and monitor a region specific reference system. Also, please see the responses in Section 2.2 and 2.3.

Comment 213

Reference system approach must incorporate key biophysical factors into exceedance frequency

In SCCRWP's 2006 study, certain biophysical factors were found to correlate to the exceedance frequency. For example, the study found the exceedance frequency in reference watersheds was correlated to watershed size. Moving forward, the Regional Board staff must identify a way to incorporate important environmental factors like watershed size into the natural exceedance frequency. Given the variability in the size and variable flow rates of the watersheds in the applicable area, it is critical to evaluate such variables in choosing a reference system. Other basic factors that need to be considered include a full land use analysis, temporal variability and seasonal variability.

Response: We agree that factors discussed in the comment are important for any reference watershed analysis. Hopefully, Coastkeeper will be involved in the development of any plan that is developed to identify and monitor a region specific reference system. Also, please see the responses in Section 2.2 and 2.3.

Comment 214

Staff needs to clarify definition of wet weather.

The Leo Carillo study based a natural exceedance rate on a storm event definition of one inch of rain. In contrast, this TMDL uses a wet weather definition of two inches, yet does not modify the 22% natural exceedance frequency from the Leo Carillo study. Staff needs to articulate how this discrepancy will impact the calculation of exceedance frequencies in the implementation phase of this TMDL. A calculation of natural exceedance based on a one-inch definition of rain will increase the number of wet days because more days will meet the criteria. Thus, if more wet days occur, any exceedances that would have been attributable to dry weather are actually considered wet weather in the reference system. This results in more allowable exceedance days.

Though the co-permittees may feel it is inequitable to apply the two-inch rain standard for delineating wet weather, it may have resulted in a higher exceedance frequency calculation. Nonetheless, if co-permittees are concerned wet-weather days are defined by one inch of rainfall for calculation but not implementation, the one inch standard must be applied across the board to all instances in which wet weather is defined. Thus, copermittees would be required to prepare for wet-weather events of one inch of rainfall.

Moreover, if the co-permittees are concerned about lack of consistent application of a reference system and exceedance frequency calculated using different standards, the application of a completely removed and foreign reference system should also invalidate the application of the LARWQCB-derived frequency.

Response: Please see the responses in Sections 2.2, 2.3, and 2.7.1.

Comment 215

Incorporation of natural exceedance frequency into wet weather TMDL is not properly justified

Over the course of this process, Coastkeeper has provided detailed comments on our concerns regarding how the allowable exceedance loads were quantified using the natural exceedance frequency. These concerns have gone largely unaddressed and thus we incorporate by reference our previous comments. Some of our concerns include:

i. The determination of numbers of wet days is too broad

In Appendix I, Staff defines ‘wet days’ as days with 0.2 in of rain plus the following 72 hours, regardless of whether those days actually receive any precipitation. This overly broad definition of wet days inappropriately inflates the potential number of allowable exceedance days.

ii. The calculation of the allowable exceedance load into the wet weather TMDL is not justified

The approach used to calculate the allowable exceedance load from the allowable exceedance days is arbitrary and not fully justified. Appendix I states that “the days with the highest loads were chosen as the allowable exceedance days because the highest loads in most of the watersheds correspond to open space land uses where bacteria loads are generated from natural sources”. No data are provided to support this assertion that open space areas have the largest loads and that the sources are necessarily natural. Open space areas do have anthropogenic impacts even if the land has not been highly modified (e.g. uncollected pet waste).

By including an overly broad definition of wet days and a calculation of allowable loads that is biased towards removing the highest loads from WLAs, staff has created a TMDL that errs on the side of giving co-permittees too much leeway and does not go far enough to protect water quality.

While we have reservations regarding the incorporation of the 22% allowable exceedance frequency developed for the Arroyo Sequit watershed into this TMDL, at this time we do not believe that there is sufficient data to support any other number for natural exceedance frequency. Sampling has been conducted at too few sites in the San Diego/Orange County region over too short a time period. The most conservative approach would therefore be to provide no allowable exceedance frequency until adequate data for an appropriate reference watershed is available and vetted through the SAG.

For a reference dataset to be complete it must, at a minimum, have sufficient sampling sites and frequencies to be a statistically robust. Of the two studies conducted by SCCWRP on this issue, one was focused on wet weather patterns for only two sampling years for a total of five sampling events at each site. The other was focused on dry weather for one sampling year. Also, the reference dataset must encompass sufficient inter-annual sampling in the same locations to account for differences in water years. As it stands now, we have a relatively sparse dataset for four sites in the San Diego/Orange County region. The currently available research conducted by SCCWRP, while a good foundation, is still too limited in its scope to provide the information necessary to determine a realistic and defensible natural exceedance frequency for the San

Diego region. The studies raise more questions than they answer and we cannot wait any longer to take action to restore the beneficial uses of our beaches and shorelines.

Response: The use of the wet weather allowable exceedance frequency in the wet weather TMDLs is the same as the “interim” wet weather TMDLs in the Basin Plan amendment adopted on December 12, 2007 and has not been changed. Also, please see the responses to Comments 212 and 213, and in Sections 2.2 and 2.3.

Comment 216

Compliance schedules and timelines

According to the Technical Report and BPA, permittees will be given eighteen months for the preparation of their load reduction plans (‘BLRPs’ or ‘CLRPs’). This extended timeframe for the development of a plan to initiate action seems unjustified, particularly in light of the delay in the approval of this TMDL. Permittees have known since 2007 that load reduction plans would be a cornerstone of implementing this TMDL. The delay caused by procedural issues relating to natural exceedance frequencies should not affect the development of plans to implement BMPs to control loading.

Additionally, we are disappointed with the lengthy 10+ year timeframe for the compliance schedule. Waiting a decade for final compliance is too long – these are ten years during which local residents and tourists’ health will continue to be at risk. At a minimum, the compliance schedule should require interim reductions sooner than four years. The only required interim milestone is the 50 percent in five years. We believe that the 25 percent reduction milestone should not be optional (“The Regional Board may also include additional milestones for achieving exceedance frequency reductions (e.g., 25 and 75 percent”¹²). It should be a requirement. There is no justification for further delaying those reductions.

Response: The suggested revisions are appreciated, but current requirements are appropriate. Also, please see the response to Comment 80.

Comment 217

Inappropriate distinction between Anthropogenic Sources and Controllable Sources

Coastkeeper’s February 5th 2008 comment letter outlined our concerns with the Technical Report and the Basin Plan Amendment’s inappropriate conflation of the terms anthropogenic and uncontrollable. The revised version of the Technical Report continues to conflate these terms. We therefore, reiterate our concern made during the SAG process as well as our letter from February 5th, 2008. As we have already pointed out, whether a bacteria source is controllable is unrelated to its source. The purpose of RSAA and NSEA is to “address circumstances where natural uncontrollable sources of indicator bacteria are the cause of exceedances of indicator bacteria water quality objectives.” Thus, the BPA and Technical Report exempt “uncontrollable” anthropogenic sources from regulation. This language confusion continues with the Technical Reports interchangeable use of ‘natural’ and ‘uncontrollable’.

Therefore, we recommend that Staff correctly and consistently use these terms throughout the Technical Report, BPA, and supporting Appendices.

Response: The suggested revisions are appreciated, but current text is accurate. The topic is also addressed in the RSAA/NSEA Basin Plan amendment and technical report adopted under Resolution No. R9-2008-0028.

4.16 San Diego Chapter of the Sierra Club

Comment 218

Our review of the Draft Technical Report has found the acronym for “most probable number” MPN misspelled as “MNP” on page 63 and 68 for a total of 13 times.

Response: The recommended corrections will be made in the draft Technical Report.

4.17 U.S. Environmental Protection Agency

Comment 219

Exceedence Frequency. Like other bacterial indicator TMDLs (i.e., Santa Monica Bay, Los Angeles Harbor, Malibu Creek, etc.), these TMDLs uses the reference system approach and exceedence days as a way to account for the “natural, and largely uncontrollable sources of bacteria (e.g., bird and wildlife feces) in the loads generated in the watersheds and at the beaches that can, by themselves, cause exceedences of WQOs”. However, whereas other bacteria TMDLs establish a fixed number of allowable exceedence days per year for each waterbody, the San Diego Bacteria TMDLs set an exceedence frequency. Specifically, the reference system approach is used to calculate the wet weather TMDLs by allowing a 22 percent exceedance frequency of the single sample maximum WQOs for REC-1, and the dry weather TMDLs are calculated using a zero percent allowable exceedance frequency. Although the concept is exactly the same and the TMDLs describe the calculation of exceedence days clearly (i.e., multiplying the exceedence frequency by the number of wet days for the critical period), the TMDLs lack an explanation of how compliance is determined (BPA, Pg. 53-56 and Technical TMDL Report, Section 11.3). Since each waterbody will have a variable number of exceedence days each year, when and how will compliance be assessed. Each permittee would not be able to evaluate their compliance until after the wet weather or dry weather period ends. Would regional board evaluate compliance at the end of each year or a determined wet and dry weather period? We strongly urge the regional board to provide a more detailed description of compliance determination to increase the success of dischargers’ efforts towards attaining the water quality targets.

Response: Please see the responses to Comment 26 and in Section 2.7.1.

Comment 220

Compliance Determination and TMDLs Goals (BPA and Technical TMDL Report). These TMDLs establishes two primary goals: meeting the (1) exceedence frequency based on the numeric targets and (2) total maximum mass loads (MPN/year). Although a detailed explanation of exceedence frequency and required follow-up compliance monitoring is provided, the TMDLs are deficient in describing how and when mass loads need to be achieved. For instance, is compliance evaluation determined by meeting both the number of allowable exceedence days for a described period and the mass-based Total Allowable Load requirements (BPA, Tables on Pg A25-28)? We strongly recommend further explanation of how both goals will be evaluated for compliance determination during the TMDL Compliance Period.

Response: Please see the responses to Comments 9 and 92, and in Section 2.7.1.

Comment 221

Finding 3: Definition of Total Maximum Daily Load (BPA, Pg. 2 and A5, paragraph 5). We suggest inclusion of additional language in the last sentence to read, “For the purpose of developing information for all waters not identified on the 303(d) List, states are also required to estimate the total maximum daily load with seasonal variations and margin of safety.” The current use of the single word, “TMDL”, implies the development of a complete TMDL

Technical Report including an implementation plan; Section 303(d)(3) only defined the requirement to develop and estimate three elements of the TMDL, as described above.

Response: The revision will be made as suggested by the commenter.

Comment 222

Finding 4: Water Quality Standards Interpreted in TMDLs with Numeric Targets (BPA, Pg. 2 and A5, paragraph 6). We recommend in addition to clarifying that “numeric targets and TMDLs interpret water quality standards”, but are not themselves water quality standards, we suggest that this section be expanded. The additional description should describe that numeric targets and TMDLs become enforceable requirements when included in WDR regulatory mechanisms (e.g., NPDES permits, Municipal stormwater MS4 permits, etc.).

Response: The following sentence will be added to the end of the paragraph:

The water quality standards, TMDLs, WLAs, LAs, receiving water limits, numeric targets, and/or WQBELs developed in this project become enforceable requirements after they have been incorporated into the regulatory orders issued by the San Diego Water Board and/or State Water Board (e.g., waste discharge requirements, conditional waivers, etc.).

Comment 223

Finding 7: Relationship Between Bacteria and Pathogens (BPA, Pg. 3). In support of your conclusion on identifying a correlation between pathogens and the probability of disease, we suggest adding the following citations:

- a) 2004 EPA Beach Act Rule;
- b) USEPA. 1984. Health effects criteria for fresh recreational waters. EPA-600/1 84-004.

Response: The citations listed above will be added as footnotes for Finding 7.

Comment 224

Numeric Targets Section (BPA Pg A15). Please provide more specific details on the type of information and evidence needed to justify the “moderately to lightly used area” usage frequency for a freshwater creek, as required by dischargers.

Response: Please see the responses to Comment 106 and in Section 2.6.

Comment 225

Numeric Targets Section (BPA Pg A15-16). The rationale on setting the Single Sample Maximum bacterial indicator concentrations as the wet weather targets, and geometric means as the dry weather targets should be included in the basin plan amendment; this rationale is currently provided in the Technical TMDL Report on Pg 29-30.

Response: The second paragraph of Chapter 7 section (b) will be revised as follows:

Different REC-1 WQOs were used as the basis for wet weather and dry weather allowable load (i.e., TMDL) calculations because the bacteria transport mechanisms to receiving waters are different under wet and dry weather conditions. Because wet weather conditions, or storm flow, are episodic and short in duration, and characterized by rapid wash-off and

transport of high bacteria loads, with short residence times, from all land use types to receiving waters, the single sample maximum WQOs were appropriate for use as wet weather numeric targets. For dry weather conditions, because dry weather runoff is not generated from storm flows, is not uniformly linked to every land use, and is more uniform than stormflow, with lower flows, lower loads, and slower transport, making die-off and/or amplification processes more important, the geometric mean WQOs were appropriate for use as dry weather numeric targets. Wet weather TMDL calculations were based on the REC-1 single sample maximum WQOs while dry weather TMDL calculations were based on REC-1 geometric mean WQOs.

Comment 226

Source Analysis Section (BPA Pg. A17). We recommend including a description on controllable and uncontrollable sources of bacteria, as described on Pg 4 of the Technical TMDL Report, to be added in the Basin Plan Amendment. We recommend the following specific language be added to the BPA as follows:

“Nonpoint sources were separated into controllable and uncontrollable categories. Controllable nonpoint sources are identified by land use types and coverages. Controllable nonpoint sources include land uses associated with agriculture, dairy/intensive livestock, and horse ranches (collectively referred to as agriculture land uses). These were considered controllable because the land uses are anthropogenic in nature, and load reductions can be reasonably expected with the implementation of suitable management measures. Uncontrollable nonpoint sources include loads from open recreation, open space, and water land uses (collectively referred to as open space land uses). Loads from these areas are considered uncontrollable because they come from mostly natural sources (e.g. bird and wildlife feces).”

Response: The paragraph above will be added after the first paragraph of Chapter 7 section (c) in the proposed Basin Plan amendment.

Comment 227

Wet Weather TMDL Allocations (BPA, Pg. A21 and Technical TMDL Report): Discharges from controllable land use categories that do not contribute more than five percent of the total existing mass load for all three indicator bacteria, the WLA or LA is set equal to the existing mass loads. Please provide a rationale for the use of five percent as the dividing line to set acceptable existing mass loads and critical contribution of mass loads from controllable sources.

Response: Please see the response to Comment 98.

Comment 228

Margin of Safety (BPA Pg. A24). The discussion on Margin of Safety considerations for developing wet weather and dry weather targets are extremely helpful to further explain how the selected targets are conservative and should protect water quality. We suggest the following two paragraphs be included in the Margin of Safety Section in the BPA:

“Because bacteria in wet weather runoff and streamflows have a quick travel time, and therefore, a short residence time in the waterbodies, the REC-1 single-sample maximum

WQOs were determined to be most appropriate for calculating the wet weather TMDLs. The numeric targets used for the wet weather mass-load based and concentration based TMDLs are assumed to be conservative by utilizing the most stringent REC-1 single sample maximum WQOs contained in the Ocean Plan and/or Basin Plan. (Technical TMDL Report, Pg. 72)”

“Because dry weather conditions have flows and bacteria loads much smaller in magnitude than wet weather conditions, do not occur from all land use types, and are more uniform than stormflow, the REC-1 30-day geometric mean WQOs were determined to be most appropriate for the dry weather TMDLs. The numeric targets used for the dry weather mass-load based and concentration based TMDLs are assumed to be conservative by utilizing the most stringent REC-1 30 day geometric mean WQOs contained in the Ocean Plan and/or Basin Plan. (Technical TMDL Report, Pg. 76).”

Response: The revision will be made as suggested by the commenter.

Comment 229

Alternative TMDL Compliance Schedules (BPA, Pg. A68 and Technical TMDL Report).

This Implementation Plan provides an alternative extended compliance period of up to 20 years for wet weather bacteria TMDLs for those dischargers who undertake load reduction programs for multiple pollutant constituents. This discussion does not clarify if this extended compliance period will require subsequent regional board or EO approval. We recommend further clarification of the process for which such an extended time period is allowed.

Response: As discussed in the section referenced by the commenter, the proposed alternative compliance schedules, if appropriate, will be incorporated into the various TMDL implementing orders. Depending on the type implementing order, approval may only be required by the Executive Officer (e.g., cleanup and abatement orders, investigative orders), or more likely may require approval by the San Diego Water Board (e.g., waste discharge requirements, NPDES requirements, cease and desist orders).

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