Responses to Public Comments (cont'd)

The written comments submitted on the Tentative Resolution and Basin Plan amendment and the Technical Report and Appendices A through M by Heal the Bay, County of Orange, and US Environmental Protection Agency (USEPA) (Supporting Documents 6 through 8) and the responses given below will be appended to Appendix N to the Technical Report.

Written Comment 56

(*Heal the Bay letter, dated June 3, 2008*)

A Reference-Based approach is appropriate for setting waste load allocations and load allocations.

Heal the Bay strongly favors the Los Angeles Water Quality Control Board's approach in setting the TMDL targets for the Santa Monica Bay Beaches Bacteria TMDLs, the Marina del Rey Mother's Beach and Back Basins Bacteria TMDL and the Kiddie Beach Bacteria TMDL. Of note, Mother's Beach and Kiddie Beach are enclosed beaches. This approach is based on exceedances of fecal indicator bacteria standards for both interim and final TMDL targets. The most important beneficial use that is impaired by high fecal indicator bacteria densities is recreational water contact. A TMDL based on the total number of fecal bacteria in the water, rather than the numbers of days that exceed beach water quality standards, will not lead to beneficial use attainment and is an insurmountable compliance assurance problem. How will anyone be able to determine compliance with a monthly waste load allocation in terms of billion MPN/month? Further, how will this approach verify that the receiving waterbody is no longer impaired? What happens if the discharger does not exceed the loading but does exceed water quality standards? In this case, the beach would be posted with warning signs yet compliant with the TMDL. A determination of impairment should be based on water quality standards attainment, not the monthly loading.

Every time a beach water quality standard is exceeded, a beach gets closed or warning signs are posted, and this is an impaired beneficial use. An exceedance based approach is more consistent with current risk management procedures, AB 411 requirements, and public health protection.

Also, the San Diego Regional Water Quality Control Board recently adopted this reference approach for the *Project I – Beaches and Creeks in San Diego Region TMDL*. We urge the Board to be consistent and use the reference-based approach. As noted above, this approach has been used for enclosed beaches in Region 4.

Response: A reference-based approach is not appropriate for these TMDLs due to the modeling approach that was used. In addition, an appropriate reference system is not available for these TMDLs.

The Santa Monica Bay Beaches Bacteria TMDLs and the Bacteria Project I – Beaches and Creeks in the San Diego Region TMDLs were developed and calculated using the Hydrologic Simulation Program – FORTRAN (HSPF) or Loading Simulation Program in C++ (LSPC) watershed model. In both cases, a

reference system (i.e., watershed and beach) with little or no anthropogenic sources was identified to determine an acceptable exceedance frequency. The exceedance frequency of the reference system may be used to provide an allowable additional load attributable to natural sources of bacteria.

A different approach was used to calculate and develop these TMDLs. For these TMDLs, the Environmental Fluid Dynamics Code (EDFC) receiving water model was used. In this case, the receiving water is Dana Point Harbor or San Diego Bay. In order for a reference-based approach to be applied, a reference harbor or bay with little or no anthropogenic sources would need to be identified to determine an allowable exceedance frequency. There are no such reference harbors or bays in the San Diego Region that would be applicable.

Restoration of an impaired water body to a condition in which it is once again meeting water quality objectives and fully supporting its beneficial uses is the ultimate goal and purpose of the Regional Board's TMDL program. To clarify this point, the last sentence of the first paragraph will be deleted and the second paragraph of section 10.4 will be replaced with the following:

> By design, waste load allocations and load allocations are established at levels that when met, will result in the full attainment of water quality standards. For this reason, the San Diego Water Board expects that at the end of the TMDL compliance period, applicable load and waste load allocations, as well as the water quality objectives will be met at all times in the receiving water. In the event that water quality objectives are not met at the end of the compliance period, the Board will require the dischargers to conduct an investigation to identify the specific source(s) responsible for the failure to meet WQOs. If the source is found to be anthropogenic, the San Diego Water Board will initiate enforcement or other regulatory action as appropriate to correct the problem. If the source is natural, and if all of the conditions for using the natural sources exclusion approach (NSEA) have been met, the Board will consider the application of the NSEA, including the recalculation of the TMDLs to account for the natural sources.

Written Comment 57

(*Heal the Bay letter, dated June 3, 2008*)

The TMDLs should be based on all of the California Department of Health Services beach bathing water standards.

The Draft TMDL provides wet weather targets based on the single sample maximum water quality objectives and dry weather targets based on the 30-day geometric mean and single sample maximum water quality objectives for total coliform, fecal coliform, and enterococcus. However as outlined below, there are **seven** Ocean Plan water quality standards for indicator bacteria. Thus, all seven indicators should be included as wet weather **and** dry weather targets. As written, the Draft TMDL excludes 30-day geometric mean wet weather targets. If there are not enough samples to calculate the 30-day geometric mean, the standard would not apply. However if there are five samples, which is very possible, the standard must apply. Also, the Draft TMDL is

missing single sample limits for a fecal-to-total coliform ratio. The fecal-to-coliform ratio was the indicator that was most strongly correlated to human health risk in the Santa Monica Bay Epidemiological Study. Thus, the wet and dry weather targets in the Draft TMDL should be modified to include a total/fecal ratio.

- TMDL targets are based on allowable exceedances of all seven of the state's beach water quality standards in the California Ocean Plan:
    - Single sample
        - Total coliform 10,000 MPN
        - Fecal coliform 400 MPN
        - Enterococcus 104 MPN
        - Total/fecal ratio <= 10
    - Geometric mean
        - Total coliform 1,000 MPN
        - Fecal coliform 200 MPN
        - Enterococcus 35 MPN

Response: Dana Point Harbor and San Diego Bay are considered coastal waters that are subject to the Basin Plan for the San Diego Region, not the California Ocean Plan. The Basin Plan does not include total/fecal ratio water quality objectives; therefore, these water quality objectives are not applicable.

Geometric mean water quality objectives are based on samples collected over a 30-day period. There are no storms in recent history in southern California that have lasted 30-days or more. The typical storm in the San Diego region does not last more than 2 to 3 days. Therefore, the geometric mean water quality objective would be difficult to apply in the development of the wet weather TMDLs.

Written Comment 58
(*Heal the Bay letter, dated June 3, 2008*)
The compliance point for final dry weather targets should be moved forward.
The Draft TMDL's compliance schedule requires a "50 percent reduction" in Enterococcus at year seven for wet weather and in total coliform, fecal coliform, and Enterococcus at year 3 for dry weather. Final compliance deadlines are required at 10 and 5 years in wet and dry weather, respectively.

The timeframe appears excessive for meeting final dry weather targets. As you know dry weather targets are much easier to meet than wet weather targets, and 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. Also, Orange County and Dana Point have implemented numerous BMPs at Baby Beach that have

sustainably improved water quality. Moving the final compliance dates forward is necessary to protect public health as soon as feasible during the high-use beach period.

Response: The timeframe is not excessive. The wet weather compliance schedule of 10 years for Baby Beach is consistent with the wet weather compliance schedules in Bacteria Project I – Beaches and Creeks in the San Diego Region TMDLs. The dry weather compliance schedule of 5 years for Baby Beach is actually shorter than the 10-year dry weather compliance schedules in Bacteria Project I – Beaches and Creeks in the San Diego Region TMDLs, and the 6-year compliance schedule cited by the commenter.

Even though these TMDLs have not been adopted yet, the municipalities showed their commitment to meeting water quality objectives during dry weather by implementing several BMPs. Water quality data show that the REC-1 water quality objectives are consistently being met during dry weather. The 10-year wet weather compliance schedule for Baby Beach was developed to allow dischargers as much flexibility as possible to meet the wet weather TMDLs. We are not proposing to shorten the wet or dry weather compliance periods at this time.

Written Comment 59

(*Heal the Bay letter, dated June 3, 2008*)

Birds should not be discounted as a source of bacteria pollution.

Even if birds are deemed a significant source of bacteria pollution as hypothesized, enclosed beach environments do not constitute "natural" conditions, but instead are the unintended consequence of a man-made facility designed for recreational use. Thus, a natural source exclusion is not appropriate in this situation. Further, risk associated with birds is unknown, and this loading can often mask a true human sewage problem. As stated by a peer reviewer, "[i]f watershed sources don't account for much at the shore and birds are suspected as the major source, then either data should be available to back this up or data should be gathered to confirm. Further, birds should be considered as a public health concern." Draft TMDL at B-10. Popular beaches with discarded food and trash from visitors and open trash cans serve as attractive foraging sites for gulls and pigeons. In addition from a public perception standpoint, the public does not want to swim in bird feces.

Response: Birds are not discounted as a source of bacteria. In fact, many of the BMPs that have been implemented by the municipalities, such as bird netting and covering garbage cans, are intended to reduce bird populations and bacteria loads from birds.

Bacteria loads from birds are included in the load allocation for natural and background sources, which also includes potential loads due to other sources such as terrestrial and aquatic animals, wrack line and aquatic plants, sediments, and other unidentified and unquantified sources within the waters. The actual load that can be attributed specifically to birds cannot be quantified at this time.

In the future, if the municipalities can demonstrate that all anthropogenic sources of bacteria are controlled and water quality standards still cannot be met, the natural sources exclusion approach (NSEA) may be applied. For the NSEA to be applied, however, the municipalities must also demonstrate that the residual bacteria load attributed to natural sources does not cause a health risk. Therefore, if birds or some other source is shown to cause a health risk, additional actions may be needed to address these sources to protect public health.

Written Comment 60

(*County of Orange email, dated June 5, 2008*)

One additional comment on the Technical Report: page 35, Section 5.2.3, first paragraph. The sentence citing the State of the Beach report is unnecessary. We have never disputed the fact that stormdrains are a source of bacteria discharges.

Response: This sentence citing the State of the Beach report was included to show that the County's study also supports the finding that "Urban runoff discharges from MS4s are a leading cause of receiving water quality impairments in the San Diego Region." The sentence was also added as a clarification in response to several of the comments in the April 3, 2008 letter from the County that appeared to imply that discharges from the MS4 were not occurring during dry weather, or that impairments may not be caused by discharges from the MS4.

Written Comment 61

(*US EPA letter, dated June 5, 2008*)

This bacterial indicator TMDL is distinct because it does not require wasteload reductions from MS4s for Shelter Island Shoreline Park during wet and dry weather conditions. Data and results from the linkage analysis showed an improvement of the bacterial water quality in recent years. The TMDL appropriately states that the "existing wasteload cannot exceed the WLA" and "in order to comply with these TMDLs, the responsible municipalities must continue implementing best management practices (BMPs) and collecting data". This TMDL describes the Regional Board's plan to remove the waterbody from the 303(d) list when monitoring data show attainment with WQO and sufficient data are collected to meet requirements to meet the state's listing and delisting policy. However, the TMDL should also describe the Regional Board's requirements and/or actions that will be taken when future collected data show exceedences of the WQOs. Furthermore, since bacterial indicators can increase in load in certain environments and WQOs are concentrations based, it would be critical to re-evaluate the modeled existing wasteload to determine if the parameters and conditions used in the model has changed. Specifically, the compliance schedule and monitoring can be further clarified by including more description of the types of information provided in the bacteria load reduction plan (BLRP).

Response: For Shelter Island Shoreline Park, under dry weather conditions the wasteload allocation (WLA) assigned to the MS4 is zero, meaning no wasteload is expected or allowed from the MS4 during dry weather. If there is a wasteload

discharged from the MS4 during dry weather conditions, the discharge is out of compliance with the dry weather WLA for Shelter Island Shoreline Park. For wet weather conditions, there is a wet weather WLA assigned to the MS4, and the existing wasteload cannot exceed the wet weather WLAs. The existing wasteloads, TMDLs, and WLAs were calculated under critical conditions, which are expected to account for all potential scenarios.

The Implementation Plan includes a discussion about the actions that the Regional Board can take to enforce compliance with the wasteload allocations. Under the San Diego Water Board Actions section of the Implementation Plan (section (A)(5) of the TMDL Implementation Plan in the Basin Plan amendment and section 10.6.5 of the Technical Report), it states, "The San Diego Water Board shall consider enforcement actions,[1] as necessary and appropriate, against any discharger failing to comply with applicable WDRs or discharge prohibitions. Enforcement actions may be taken, as necessary and appropriate, to control the discharge of bacteria to impaired shorelines to attain compliance with the bacteria WLAs specified in this Technical Report, or to attain compliance with the REC-1 indicator bacteria WQOs."

This is reiterated further in the TMDL Implementation Milestones, which includes an Implementation Action of "Take enforcement actions to attain compliance with the WLAs" as needed after the effective date.

As discussed in the response to previous comment 56, restoration of an impaired water body to a condition in which it is once again meeting water quality objectives and fully supporting its beneficial uses is the ultimate goal and purpose of the Regional Board's TMDL program. If discharges from the MS4 cause or contribute to the exceedance of water quality objectives and impair the beneficial uses after the end of the compliance schedules, the dischargers will be subject to enforcement action. If exceedances continue after the end of the compliance schedules, the Regional Board will require the dischargers to conduct an investigation to identify the specific source(s) responsible for the failure to meet the water quality objectives. If the source is found to be anthropogenic, the San Diego Water Board will initiate enforcement or other regulatory action as appropriate to correct the problem.

In addition the following text will be added to the end of the second paragraph of the Shelter Island Shoreline Park Compliance Schedule discussion (section 10.4 of the Technical Report and the appropriate location in the Basin Plan amendment):

> In addition, the reporting requirements for the Shelter Island Shoreline Park TMDL must also include a periodic demonstration that wasteload allocations and water quality objectives are being met.

[1] An enforcement action is any formal or informal action taken to address an incidence of actual or threatened noncompliance with existing regulations or provisions designed to protect water quality. Potential enforcement actions including notices of violation (NOVs), notices to comply (NTCs), imposition of time schedules (TSO), issuance of cease and desist orders (CDOs) and cleanup and abatement orders (CAOs), administrative civil liability (ACL), and referral to the attorney general (AG) or district attorney (DA). The San Diego Water Board generally implements enforcement through an escalating series of actions to: (1) assist cooperative dischargers in achieving compliance; (2) compel compliance for repeat violations and recalcitrant violators; and (3) provide a disincentive for noncompliance.

Written Comment 62
(*US EPA letter, dated June 5, 2008*)
Currently, this TMDL does not provide the locations of the compliance monitoring stations to meet the numeric water quality objectives and WLAs. In our discussions, you have indicated the compliance monitoring stations will include the monitoring stations used to determine the impairment status in this TMDL. EPA assumes these include the four Baby Beach Bacteria monitoring stations, one SISP bacteria monitoring station (Figures 4-1 and 4-2 of the draft technical report) and additional stations, if needed, to address potential sources of impairment[2]. An effective monitoring plan, as required in your implementation plan, should include descriptions of the monitoring stations used to meet compliance with the TMDL and implementation plan.

Response: The Basin Plan amendment page A-16 (Supporting Document 2) and Technical Report page 90 (Supporting Document 5), and Appendix C page A-16 (Supporting Document 5) will be revised as follows to provide additional clarification:

- Because water quality data will ultimately determine if a waterbody will be delisted from the 303(d) List, the BLRP should include a monitoring and reporting program that contains the following elements:
  - Locations of water quality sampling sites that are spatially representative of the waterbody and appropriate for identifying potential sources, including, at a minimum, the monitoring stations currently used to monitor water quality.

[2]For instance, a bacterial source identification study of Baby Beach showed four primary sources where BMPs can be implemented; these include storm drains, bacteria resident in sediments, near-beach water circulation and bacteria contamination from pigeons and gulf. Haimann, R., Lissner, A., Moore, D.F., Ferguson, D.M.. Baby Beach Bacteriological Special Studies Report. 2003. County of Orange Resource and Development Management Department.
www.ocwatersheds.com/watershed/sanjaun_baby_beach.asp. Santa Ana, CA.