



GAIL FARBER, Director

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

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Public Comment
LA Bacteria TMDL
Deadline: 2/15/13 by 12 noon



ADDRESS ALL CORRESPONDENCE TO:
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February 14, 2013

IN REPLY PLEASE

REFER TO FILE: WM-9

Ms. Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Dear Ms. Townsend:

COMMENT LETTER – RECONSIDERATION OF LOS ANGELES REGION'S COASTAL BACTERIA TOTAL MAXIMUM DAILY LOADS

On behalf of the County of Los Angeles and the Los Angeles County Flood Control District, thank you for the opportunity to comment on the proposed approval of amendments to the Water Quality Control Plan for the Los Angeles Region to revise Total Maximum Daily Loads for Bacteria for Santa Monica Bay Beaches, Marina del Rey Harbor, Los Angeles Harbor, Ballona Creek, and Malibu Creek. Enclosed are our comments for your review and consideration.

If you have any questions, please contact me at (626) 458-4300 or ghildeb@dpw.lacounty.gov or your staff may contact Ms. Angela George at (626) 458-4325 or ageorge@dpw.lacounty.gov.

Very truly yours,

GAIL FARBER

Director of Public Works

GARY HILDEBRAND
Assistant Deputy Director
Watershed Management Division

GA:ac

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Enc.

cc: Chief Executive Office (Dorothea Park)
County Counsel (Judith Fries)

WATERSHED MANAGEMENT DIV-11TH FLOOR

COMMENTS OF THE COUNTY OF LOS ANGELES AND THE LOS ANGELES COUNTY FLOOD CONTROL DISTRICT ON THE PROPOSED AMENDMENT TO THE BASIN PLAN TO REVISE BACTERIA TOTAL MAXIMUM DAILY LOADS FOR COASTAL WATERBODIES

These comments are submitted by Los Angeles County (County) and the Los Angeles County Flood Control District (LACFCD). Although the Regional Board did an admirable job, the amended TMDLs still contain omissions or elements that do not reflect good science. These include the lack of guidance for application of the natural source exclusion approach, the failure to specifically provide for the use of site-specific objectives, the failure to consistently apply the reference beach approach, and the failure to follow EPA's recommendation to use only enterococcus as the bacteria indicator for marine waters. The amended TMDLs should also provide that compliance schedules reflect parties' financial capability as recommended by recent EPA guidance, require the California Department of Parks and Recreation (State Parks) to perform a study of loading from birds in Malibu lagoon, and define the meaning of "joint responsibility."

A. Dischargers should not be responsible for naturally occurring bacteria

Over the last decade, the County and the LACFCD have invested tens of millions of dollars to control bacteria from stormdrain discharges to recreational waterbodies within the County. These investments were made with the recognition that clean beaches are a backbone of the local economy and that public health is of utmost priority. As a result, the beaches are cleaner and beachgoers are safer than before.

Despite these efforts, some bacterial exceedances continue to occur. Various studies and observations indicate that these remaining exceedances are naturally occurring and not due to anthropogenic sources. For example, Puerco Beach, which is located downstream of a fully operational UV-radiation treatment facility, is still among the top ten "beach bummers" in Heal the Bay's beach report card; the cause being naturally growing kelp and algae on the beach. The natural sources exclusion (NSE)¹ approach, as defined in the bacteria TMDLs, was intended to address these situations, but has never been implemented in practice.

¹ Under the NSE implementation provision, after all anthropogenic sources of bacteria have been controlled such that they do not cause or contribute to an exceedance of the single sample objectives and natural sources of bacteria have been identified and quantified, a certain frequency of exceedance of the single sample objectives shall be permitted based on the residual exceedance frequency in the specific waterbody. The residual exceedance frequency shall define the background level of exceedance due to natural sources.

In a letter to Los Angeles Regional Water Quality Control Board (Regional Board) dated May 7, 2012, we noted the need to apply NSE for sites where anthropogenic sources have been addressed or where the bacteria have been demonstrated to be naturally occurring, including Malibu Lagoon, Marina del Rey harbor, and several locations along Santa Monica Bay where dry weather stormdrain discharges have been diverted for treatment. Regional Board staff responded that insufficient information has been collected, and that it is premature at this time to evaluate the validity of NSE for these waterbodies.

During the June 7, 2012, public hearing, in response to public testimony, the Regional Board directed staff to provide guidance on NSE implementation. However, eight months have elapsed without any indication that guidance is being developed. This unacceptably ignores the need to identify all sources of bacteria so that greater understanding of the causes of exceedances can be achieved. We urge the State Water Board to direct the Regional Board to provide guidance within six months on the implementation of NSE.

B. Consider site-specific bacteria objectives for waterbodies primarily impacted by stormwater discharges

Existing bacteria objectives are established based on epidemiological studies conducted at waterbodies primarily impacted by human sources associated with treated wastewater discharges. Currently, these objectives are applied to all waterbodies, regardless of the sources or discharge types. Recent studies^{2,3,4,5} have shown that waterbodies primarily impacted by non-human bacteria sources and/or non-POTW discharges, such as stormwater, may have less human health risk, warranting the need to establish a different standard for those areas. In this regard, EPA's 2012 recreational water quality criteria states:

“... the sources of contamination appears to be an important factor for understanding the human health risk associated with recreational waters and that the potential human health risks from human versus non-human fecal sources can vary. ...The risk presented by fecal contamination from non-human sources has been shown to be

² Colford et al. (2007): Water quality indicators and the risk of illness at beaches with non-point sources of fecal contamination. *Epidemiology*, 18(1), 27-35.

³ Schoen and Ashbolt (2010): Assessing pathogen risk to swimmers at non-sewage impacted recreational beaches. *Environmental Science and Technology*, 44(7), 2286-2291.

⁴ Soller et al. (2010): Estimated human health risks from exposure to recreational waters impacted by human and non-human sources of fecal contamination. *Water Research*, 44(16), 4674-4691.

⁵ Wuertz et al. (2011): Quantification of pathogens and sources of microbial indicators for QMRA in recreational waters. *WERF Report*, PATH2R08.

potentially less than the risk presented by fecal contamination from human sources.”⁶

With this understanding, EPA proposed Quantitative Microbial Risk Assessment (QMRA) as a new tool to be used by states to develop site-specific criteria for waterbodies primarily impacted by non-human sources of bacteria and/or non-POTW discharges. In its resolution to adopt the proposed TMDL modifications, the State Water Board should include the following finding regarding the use of QMRA:

As part of the natural sources exclusion analysis, the Regional Board shall consider the results of Quantitative Microbial Risk Assessment (QMRA) studies to establish site-specific bacterial objectives for waterbodies where the presence of bacterial indicators is predominantly from non-human sources.

The State Water Board should also make funding or grants available for studies associated with QMRA or site-specific criteria development.

C. The reference system approach should be consistently applied

The Regional Board claims that it applied “reference system⁷/anti-degradation approach”⁸ in setting waste load allocation for the TMDLs under consideration. Contrary to such claim, the TMDLs for Santa Monica Bay (SMB) Beaches, Marina del Rey Harbor, Ballona Creek Estuary and Malibu Lagoon, as proposed, fail to recognize the contribution of natural sources during summer dry weather.

At the time when these TMDLs were originally adopted by Regional Board, the monitoring at the reference beach (i.e., Leo Carrillo Beach), with samples taken 50 yards away from the creek discharge site, had not detected exceedances during summer dry weather. As a result, zero allowable exceedance frequency was adopted as waste load allocation for summer dry weather. The adoption of the SMB beaches TMDL in 2002 changed this monitoring location and required shoreline monitoring sites, including that of the reference site, to be moved to the wave wash (i.e., point of discharge). Since 2004, monitoring has been conducted at these new sites under the Regional Board’s oversight. That monitoring provided a better understanding of the influence of natural sources of bacteria during summer dry weather.

⁶ USEPA, Office of Water (2012): Recreational water quality criteria, p. 35-36.

⁷ Reference system is defined as an area and associated monitoring point that is not impacted by human activities that potentially affect bacteria densities in the receiving waterbody.

⁸ Under the reference system/anti-degradation implementation provision, a certain frequency of exceedance of the single sample objectives shall be permitted on the basis of the observed exceedance frequency in the selected reference system or the targeted waterbody, whichever is less.

The examination of single sample exceedances at the reference beach using data from 2004 to 2010 shows an average exceedance rate of 11 percent during summer dry weather. In a comment letter submitted to Regional Board, dated May 7, 2012, as well as at the June 7, 2012 public hearing, the County and LACFCD requested the Regional Board to update the summer dry single sample limits to reflect this new data. Despite this request, Regional Board continues to recommend the zero exceedance frequency it originally instituted for the summer dry weather based on pre-TMDL data. This defeats the purpose of the re-opener, i.e., incorporating new data and scientific knowledge gained over the years. Most importantly, it is inconsistent with the Regional Board's own repeated assertion that it is not its intent to require diversion of natural creeks or treatment of natural sources of bacteria from undeveloped areas.

Staff has given only one reason for not allowing single sample exceedances during summer dry weather, that beaches in general have highest recreational usage rates during summer dry weather. While we understand and share the concern about higher summer usage at beaches, this cannot be a plausible reason to not apply the reference system approach during dry weather. Doing so is essentially requiring dischargers to spend tax dollars to address naturally occurring bacteria which present less human health risk. We believe that this is not the intent of the Regional Board as it has repeatedly stated so. Since the inception of the bacteria TMDLs in Los Angeles Region in 2002, the reference system approach has been the foundation of these TMDLs and was applied year-round ever since, irrespective of the season. The Regional Board provided no scientific evidence for departing from this approach now, simply because the reference beach has shown exceedances during dry weather.

Therefore, State Board should direct the Regional Board to apply the reference system approach consistently for all three seasons: wet, winter dry, and summer dry. Accordingly, an allowable exceedance rate of 11 percent should be used to set waste load allocations for summer dry weather. This is in line with EPA's 2012 criteria which allows up to 10 percent exceedance for single samples during any time and/or season of the year.

Attachment A to these comments sets forth in greater detail the history of the TMDLs, the Regional Board's consistent statements that it intends to implement the reference beach system to avoid treatment of natural sources, and its failure to update the amended TMDLs to fully implement that system.

D. Only enterococcus should be used as bacteria indicator for marine waters

USEPA's 2012 recreational water quality criteria state the following regarding bacteria indicators:

*"Not all indicators have a clear relationship to illness levels observed in epidemiological studies. Two microorganisms that have consistently performed well as indicators of illness during epidemiological studies are enterococci in both fresh and marine water and E. coli in fresh water."*⁹

Accordingly, the USEPA recommended the use of enterococci as a bacterial indicator for marine waters. USEPA's conclusion and recommendation were drawn upon the latest research and science on the link between illness and fecal contamination at recreational beaches. Many studies, including USEPA studies, have found no correlation between other bacteria indicators, such as total coliform and fecal coliform, and human health risks. Despite recent science and USEPA's recommendations, Regional Board continues to use traditional bacteria indicators (total coliform, fecal coliform, enterococcus, and fecal-to-total coliform ratio). The continued use of these multiple indicators is inappropriate.

In its response to comments, the Regional Board stated that "changes to bacterial standards have not been considered for this action, have not been noticed for public comment, and are outside of the scope of this reconsideration."¹⁰ We disagree with this assertion for several reasons. First, we believe that revising the TMDLs using scientific knowledge gained in recent years is within the purview of this reconsideration. If not, then the Regional Board has failed to provide stakeholders the option to bring all issues of concern during this reconsideration. Second, contrary to its assertion, the Regional Board has included new requirements, such as outfall monitoring, which are not part of the original scope of the reopener as defined in the TMDLs. Third, the TMDL has no separate schedule set for reconsideration of issues that the Regional Board referred as "issues outside of the scope of this reconsideration", such as revision to the bacteria standards. Instead of addressing permittee's legitimate concerns, Regional Board inappropriately characterized those concerns as outside of the scope.

Therefore, we request that the State Board direct the Regional Board to update the marine water bacteria standard as part of this re-opener to reflect enterococcus as the sole bacteria indicator for marine waters. Further, we request that the enterococcus objective be revised to 130 MPN/100ml, consistent with USEPA's new

⁹ USEPA, Office of Water (2012): Recreational water quality criteria, p. 9.

¹⁰ See Response to Comments, SMB Bacteria TMDL p. 121.

criteria. If the State Board also considers this issue to be outside of the scope of this reconsideration, then it should direct the Regional Board to conduct another reopener within a year to address this and other important issues that were excluded during the current reopener.

E. The Regional Board has failed to enforce the requirement that State Parks perform a study of bacteria loading from birds in Malibu lagoon

From the adoption of the Malibu Bacteria TMDL, it has been recognized that natural sources of bacteria are present in the lagoon and the sources are sufficient to cause exceedances of the single sample and/or 30-day geometric mean water quality objectives¹¹. It has also been recognized that birds in the lagoon are a chief, natural source¹².

State Parks, based on its ownership of the Malibu Lagoon and Malibu Creek State Park, is designated as the responsible agency for these properties¹³. When the TMDL was adopted, however, the Regional Board did not impose any obligation on State Parks, except an obligation to conduct a study of bacteria loadings from the birds in the lagoon, water quality monitoring, and compliance with load allocations applicable to their onsite wastewater treatment systems¹⁴. The study was to be submitted in 2008, two years after the effective date of the TMDL¹⁵.

Notwithstanding the importance of determining the bacteria loads of the birds in Malibu lagoon in order to distinguish those loads from human sources, the Regional Board has not required State Parks to perform the one study it was required to perform. At the hearing on the reconsideration of this TMDL, the County and LACFCD requested that the Regional Board direct State Parks to perform this study. They noted that the study is important to further understand the sources of bacteria in Malibu Lagoon itself, and could have the potential for increasing the Regional Board's knowledge about the sources of bacteria that are impacting Surfrider Beach, located close to the lagoon.

In response, the Regional Board stated that the bird study was not necessary. It stated that the estimate of bacteria loadings from birds in the lagoon had already been described in the original 2004 staff report and a further study would not improve those estimates¹⁶.

¹¹ Staff Report, revised December 13, 2004 at 6

¹² Staff Report, p. 6

¹³ Resolution No. 2004-019 R, Attachment A, p. 4-5

¹⁴ Resolution No. 2004-19 R, Attachment A, p. 5

¹⁵ Attachment A, p. 12

¹⁶ See Response to Comment No. 1.4

The Regional Board's failure to require State Parks to perform a study to determine the bacteria loadings from birds, as has been required by the TMDL since 2004, has left critical data unknown. All parties agree that birds in the lagoon are a significant source of bacteria. The Regional Board states that the estimates in the 2004 staff report are sufficient, but that was not the staff's conclusion in 2004 when they adopted that report. Instead, the Regional Board found in 2004 that, notwithstanding the data in that report, a study should be performed to further the Board's and the parties' understanding of the bird's contribution. Moreover, the data in the 2004 staff report is based on a 1998 report¹⁷. No effort has been made to determine whether that data currently remains the same.

In 2004, the Regional Board found that State Parks should perform a study of the contribution of bacteria from birds to Malibu Lagoon; so that the parties would have a better understanding of the contribution coming from natural sources. This information is still pertinent today. Therefore, the Regional Board should be ordered to direct State Parks to perform the study required by the TMDL.

F. The TMDLs' compliance schedules should be extended in consideration of permittee's financial capability

As noted in the May 2012 letter to the Regional Board, the timelines to comply with the TMDLs were established arbitrarily and not supported by evidence. Regional Board staff responded that the TMDLs' compliance schedules were outside the scope of the current reopeners. In establishing compliance timelines, the Regional Board should balance the need to restore full beneficial uses as quickly as possible with the state of current science and technology and the financial capability of the municipal dischargers. In a recent memorandum dated January 13, 2013, EPA indicated that it is working on a "financial capability framework" to address this important issue. EPA states:

"It is essential that long-term approaches to meeting CWA objectives are sustainable and within a community's financial capability. A community's financial capability and other relevant factors are important when developing appropriate compliance schedules that ensure human health and environmental protection."¹⁸

We strongly support EPA's direction and urge the State Water Board to direct the Regional Board to reconsider the TMDLs' compliance schedules to include an assessment of the municipal dischargers' financial capability.

¹⁷ Staff Report, December 13, 2004, p. 22

¹⁸ USEPA, Office of Water (2013): Memorandum on assessing financial capability for municipal clean water act requirements, p. 1

G. The phrase “jointly responsible”, as used in the TMDLs, is confusing and should be defined

Under the waste load allocations section, the TMDLs state:

“The responsible jurisdictions and responsible agencies within the watershed are jointly responsible for complying with the waste load allocation at the monitoring locations ...”

The TMDLs, however, do not define what is meant by “jointly responsible.” This has caused significant confusion.

It is our understanding, based on comments made by members of the Regional Board at various board hearings, that it is not the intent of the Board to make any one jurisdiction responsible for the discharges of other jurisdictions. Instead, it is our understanding that, by referring to “jointly responsible,” the board members intend to convey the requirement that all jurisdictions assign waste load allocations must have programs to meet those allegations, not just some jurisdictions.

The County and the LACFCD made this request at the hearing on the TMDLs. In response, the Regional Board stated that this would be addressed in the municipal stormwater permit.¹⁹

It is important, however, that the clarification be added to the TMDLs also, so that there is no question about their consistency. Accordingly, we request that the definition the Regional Board used in the storm water permit for coastal areas of Los Angeles County also be added (as a footnote) in each of the TMDLs:

“Joint responsibility” means that the Permittees that have commingled MS4 discharges are responsible for implementing programs in their respective jurisdictions, or within the MS4 for which they are an owner and/or operator, to meet the water quality-based effluent limitations and/or receiving water limitations assigned to such commingled MS4 discharges.²⁰

¹⁹ See Response to Comments, SMB Bacteria TMDL p. 124

²⁰ See Order No. R4-2012-0175, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges Within the Coastal Watersheds of Los Angeles County, etc., p. 23.

ATTACHMENT A – USE OF REFERENCE SYSTEM

SMB BACTERIA TMDL

The SMB dry weather bacteria TMDL was originally adopted by the Regional Board on January 24, 2002 (Resolution Nos. 02-004). At the time of its adoption, the Regional Board chose to define its waste load allocations in terms of allowable exceedance days. There was a specific reason why waste load allocations were defined this way. The Regional Board staff report explained that:

The bacteria indicators used to assess water quality are not specific to human sewage. Fecal matter from wildlife and birds can be a source of elevated levels of bacteria, and vegetation can be a source of elevated levels of total coliform bacteria, specifically.

. . . It is not the intent of this TMDL to require diversion of natural coastal creeks or to require treatment of natural sources of bacteria from undeveloped areas. Therefore, the approach staff has chosen is to define reference subwatershed(s) and beach(es) within Santa Monica Bay, which can then be used to set the allowable number of exceedance days. Arroyo Sequit Canyon and the beach to which it drains, Leo Carrillo Beach, have been selected as the reference system.

Staff Report, January 14, 2002, at p.21 (emphasis added).

At the time the TMDL was adopted, the monitoring at the reference beach had not detected any exceedances during summer dry weather and exceedances 3% of the time during winter dry weather. Staff Report, p. 23. The TMDL therefore adopted these dry weather waste load allocations, except where historical monitoring data for a particular shoreline site showed fewer exceedances, in which case the TMDL set the number of exceedances at the lower historical rate. Staff Report, pp. 23-24.

These principles were adopted in the basin plan amendment itself. Table 7.4.1, Waste Load Allocations, specifically noted that the allowable number of exceedance days “is based on the lesser of two criteria (1) exceedance days in the designated reference system and (2) exceedance days based on historical bacteriological data at the monitoring site.”

When the TMDL was adopted, the Regional Board recognized that the data upon which the TMDL was based was incomplete. The Regional Board, therefore, specifically included a provision that it would reopen the TMDL 2 years after its effective date to re-evaluate allowable winter dry weather exceedance days based on additional data and for “a re-evaluation of the reference system selected to set allowable exceedance levels.” Table 7-4.3.

The Regional Board's reliance on the reference beach to address natural sources of bacteria was reiterated in December 2002 when the Board adopted the SMB wet weather bacteria TMDL. In adopting that resolution, the Board also specifically amended the Basin Plan to include both the reference system and natural source exclusion with respect to the implementation of the SMB bacteria TMDLs' single sample objectives. The Board amended the Basin Plan to provide:

In the context of a TMDL, the Regional Board may implement the single sample objectives in fresh and marine waters by using a "reference system/antidegradation approach" or "natural sources exclusion approach" as discussed below. A reference system is defined as an area and associated monitoring point that is not impacted by human activities that potentially affect bacteria densities in the receiving water body.

These approaches recognize that there are natural sources of bacteria, which may cause or contribute to exceedances of the single sample objectives for bacterial indicators. *They also acknowledge that it is not the intent of the Regional Board to require treatment of natural sources of bacteria from undeveloped areas. Such requirements, if imposed by the Regional Board, could adversely affect valuable aquatic life and wildlife beneficial uses supported by natural water bodies in the Region.*

Under the reference system/antidegradation implementation procedure, *a certain frequency of exceedance of the single sample objectives above shall be permitted on the basis of the observed exceedance frequency in the selected reference system or the targeted water body, whichever is less.* The reference system/antidegradation approach ensures that bacteriological water quality is at least as good as that of a reference system and that no degradation of existing bacteriological water quality is permitted where existing bacteriological water quality is better than that of the selected reference system.

Under the natural sources exclusion implementation procedure, after all anthropogenic sources of bacteria have been controlled such that they do not cause or contribute to an exceedance of the single sample objectives and natural sources have been identified and quantified, a certain frequency of exceedance of the single sample objectives shall be permitted based on the residual exceedance frequency in the specific water body. The residual exceedance frequency shall define the background level of exceedance due to natural sources. The "natural sources exclusion" approach may be used if an appropriate reference

system cannot be identified due to unique characteristics of the target water body. . . .

The appropriateness of these approaches and the specific exceedance frequencies to be permitted under each will be evaluated within the context of TMDL development for a specific water body, at which time the Regional Board may select one of these approaches, if appropriate. (Emphasis added.)

In its resolution adopting the SMB wet weather bacteria TMDL, the Board specifically reiterated this policy:

21. The Regional Board's intent in implementing the bacteria objectives using a "reference system/anti-degradation approach" is to ensure that bacteriological water quality is at least as good as that of a reference site The Regional Board's intent in implementing the bacteria objectives using a "natural sources exclusion approach" is to ensure that all anthropogenic sources of bacteria are controlled such that they do not cause an exceedance of the single sample objectives. These approaches are consistent with state and federal anti-degradation policies . . . while acknowledging that it is not the intent of the Regional Board to require treatment or diversion of natural coastal creeks or to require treatment of natural sources of bacteria from undeveloped areas. . .

22. For the *Wet-Weather* and *Dry-Weather Bacteria* TMDLs at Santa Monica Bay beaches, Leo Carrillo Beach and its associated drainage area, Arroyo Sequit Canyon, were selected as the local reference system . . . (Emphasis added.)

The Board additionally recognized the need to reopen this TMDL also to refine it after experience with the reference beach:

26. Previously, the Regional Board adopted a *Dry-Weather Bacteria* TMDL for the Santa Monica Bay Beaches. The *Dry-Weather* TMDL includes implementation provisions. . . including a provision to reconsider two years after the effective date the *Dry Weather* TMDL and specifically the reference beach(es) used. Because that effort overlaps with reconsideration of the reference beach(es) anticipated by this *Wet-Weather* TMDL, the Regional Board proposes to coordinate the reconsiderations of the reference beach approach to assure efficiency and consistency in implementing the two Santa Monica Beaches TMDLs. (Resolution No. 2002-022, Finding No. 26.)

The TMDL therefore provided that the reference system would be re-evaluated 4 years after the effective date of the wet-weather TMDL. Basin Plan Table 7.4-7.

The wet weather TMDL became effective on July 15, 2003. Neither the SMB Dry Weather nor Wet Weather TMDLs, however, were reopened within four years of the effective date. Instead the Regional Board did not reopen the TMDLs until June 7, 2012, when the Board took the action now pending before the State Board.

During the period from 2004 through 2012, parties continued to monitor the Leo Carrillo reference beach under the Regional Board's oversight. That monitoring provided a better understanding of the influence of natural sources on water quality. During this period the reference beach exceeded single sample indicator bacteria limits in excess of 10% of the time during summer dry weather. Regional Board Staff Report, June 2012, p. 11.

At the hearing on the reopened TMDLs, the County and the District requested the Regional Board to update the Dry Weather single sample limits to reflect this new monitoring data. The Regional Board refused. In its response to comments the Regional Board gave only one reason for not updating the Dry Weather TMDL to reflect the monitoring data from the reference beach, that being that beaches in general have high usage rates during summer dry weather. This is not a reason to decline to apply the data from the reference beach.

First, the TMDLs repeatedly state that they are applying a reference beach system and doing so to account for natural sources of bacteria. This approach was sufficient when the TMDL was adopted in 2002 and has been a foundation of the SMB dry and wet weather bacteria TMDLs ever since. The Regional Board has articulated no scientific basis for departing from this approach now, simply because the reference beach has shown exceedances during dry weather.

Second, the failure to account for natural sources through use of the reference beach data means that parties could be required to address and treat natural sources of bacteria, as the reference beach shows that there are contributions from these natural sources. This is not the intent of the TMDL, which has repeatedly stated that it is not the intent to require the treatment of natural sources.¹

Third, we understand the concern about high summer usage at beaches. We share that concern. There is no indication, however, that bacteria indicators that derive from natural sources present the same health risk as those that come from human sewage.

¹ In its staff report, the Regional Board said that dry weather exceedances at the reference beach occurred only in 2005, 2006, and 2008, with the exceedances being primarily in 2006. This is not correct. Exceedances at Leo Carrillo beach occurred in 2005, 2006, 2008, and 2011. Although dry weather exceedances were the highest in 2006, there were a number of exceedances in 2005 and 2011 also. See County and District's Comment Letter to the Regional Board, dated May 7, 2012 at page 5.

Whereas the EPA water quality criteria that have been adopted by the Regional Board are based on exposure to human sewage, studies by the Southern California Coastal Water Research Project have shown less or no health risk where human sources are absent. See *e.g.*, Recreational and Water Contact Illness in Mission Bay, California (SCCRWP 2005).

There is therefore no scientific basis to depart from use of the reference beach system for dry weather. To do so will require parties to address natural sources of bacteria, inconsistent with the stated goals of the TMDLs. The TMDL therefore should be remanded and the Regional Board directed to apply the reference beach to dry as well as wet weather conditions.

MALIBU CREEK WATERSHED TMDL

Like the SMB Bacteria TMDL, the Malibu Creek Watershed Bacteria TMDL also uses a reference beach system to set waste load allocations. Like the SMB Bacteria TMDL, the Malibu Creek Bacteria TMDL uses Leo Carrillo beach as the reference beach for the lagoon. Like the SMB Bacteria TMDL, although the Regional Board says the TMDL is using this reference beach, the amended TMDL for the lagoon does not incorporate the most current data from the reference beach.

The Malibu Bacteria TMDL was originally adopted on December 13, 2004. The TMDL states that implementation of the bacteria objectives and TMDL numeric targets “is achieved using a reference system/anti-degradation approach. . . .” (Resolution No. 2004-019 R, Attachment A, p. 3). The staff report specifically recognized that there are natural sources of bacteria, specifically birds, in the lagoon, and, “that in some instances these sources may contribute bacterial loading sufficient to cause exceedance of the single sample and/or 30-day geometric mean water quality objective.” Staff Report, December 13, 2004, p. 6. Arroyo Sequit and Leo Carrillo Beach were adopted as the reference beach. Staff Report, p. 7.

Like the SMB Bacteria TMDL, at the time of the Malibu Bacteria TMDL was adopted, the data did not show any dry weather exceedances 50 yards from the discharge point at Leo Carrillo Beach. Accordingly, the allowable exceedance days were set at zero for the lagoon, even though the staff report recognized that the lagoon had a significantly larger bird population than was present at Leo Carrillo Beach. (Staff Report, p. 7 n.2, p.8.)

At the reconsideration of the Malibu Bacteria TMDL, staff reiterated that it was going to continue to use Leo Carrillo Beach as the reference system for Malibu Lagoon (Staff Report, June 17, 2012, p.15). The TMDL itself reiterates that it is continuing to use the reference system (Resolution No. R12-009, Attachment A, p. 3).

As discussed with respect to the SMB Bacteria TMDL, however, the Regional Board failed to reflect the current data for the reference beach during dry weather. The new data shows exceedance rates of approximately 11% during summer dry weather.

There is no scientific basis for not reflecting the reference beach data when the Regional Board states that it is using a reference beach to address natural sources. This is particularly true where the Regional Board recognizes the fact that birds are more present at Malibu Lagoon than the reference beach itself.

The State Board should remand the TMDL to the Regional Board and direct it to reflect the reference beach data for summer dry weather.

BALLONA CREEK AND MARINA DEL REY TMDLS

The Regional Board's amendments to the Ballona Creek and Marina del Rey Bacteria TMDLs contain the same omission that was contained in the amended SMB Beaches and Malibu Bacteria TMDLs. Again, although the Regional Board is using a reference system, and in particular Leo Carillo Beach, the Regional Board has failed to reflect the updated data from Leo Carillo Beach in the amended TMDLs.

Like the other TMDLS, both Ballona and Marina Del Rey used the reference system. See Resolution No. 2006-11, Attachment A, p. 3 (Ballona), Resolution No. 2003-012, Attachment A, p. 3 (Marina).

Upon reconsideration, both TMDLs continue to use the reference beach system, and Leo Carillo Beach in particular. Resolution No. R12-008, Attachment A, p.3; Staff Report, June 7, 2012, p. 12) (Ballona)²; Resolution No. 12-007, Attachment A, p.3, Staff Report, June 2012, p. 10 (Marina). Again, however, like the other TMDLs discussed above, the Regional Board failed to reflect the most current summer dry weather data from Leo Carillo Beach. This failure could result in parties being required to treat natural sources of bacteria, contrary to the consistently stated intent of the Regional Board when adopting these TMDLs. No scientific basis exists for this omission, particularly in that the Regional Board is dealing here with natural sources as opposed to human sources.

The State Board should remand the Ballona and Marina TMDLs back to the Regional Board and direct it to reflect the current summer dry weather data from the reference beach in determining the summer dry weather waste load allocations.

² It should be noted that the Staff Report for Ballona said that there was zero exceedances for summer dry weather at Leo Carillo. Staff Report, p. 12. Regional Board staff recognized in their response to comments with respect to Santa Monica Bay Bacteria that this statement is wrong, that in fact "between April 2004 and November 2010, Leo Carillo has been observed to exceed single sample indicator bacteria limits in excess of ten percent of the time during the summer period" SMB Bacteria, response to comments, p. 46; see also SMB Bacteria Staff Report, June 2012, p.11.)