

Response to comments from the following:

1. Santa Ana Watershed Project Authority (Resolution No. 2012-03)
2. Orange County Public Works
3. City of Irvine
4. City of Costa Mesa
5. City of Lake Forest
6. Orange County Water District
7. Eastern Municipal Water District
8. Western Municipal Water District
9. California Stormwater Quality Association
10. Orange County Business Council
11. City of Huntington Beach
12. City of Brea
13. City of Fullerton
14. City of Orange
15. City of Tustin
16. The Irvine Company

Comment letters submitted by the listed agencies and organizations express support for the proposed Basin Plan amendments.	Comments noted and support appreciated.
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Responses to February 27, 2012 Comments – Riverside County Flood Control and Water Conservation District

<p>The comments provided by Riverside County Flood Control and Water Conservation District (Jason Uhley, Chief of Watershed Protection) support the adoption of the proposed Basin Plan amendments as is. The District recommends that any substantive changes that may be proposed and considered at the Regional Board hearing be brought back to the Stormwater Quality Standards Task Force for careful consideration before such changes are considered for approval by the Regional Board.</p>	<p>Regional Board staff agrees that any substantive proposed modifications to the amendments should be considered by the Stormwater Quality Standards Task Force before being considered for approval by the Regional Board</p>
<p>The District's comments include a summary of the proposed amendments and advise that no response is necessary unless the summary presentation is incorrect. This summary includes references (p. 1, second paragraph and p. 4, paragraphs # 14) to the "exclusion" of uncontrollable natural sources of bacteria from the application of the proposed objectives.</p>	<p>It may be appropriate to clarify and confirm what is proposed in the amendments with respect to uncontrollable sources. The amendments include a proposed narrative pathogen objective, which mirrors many other narrative objectives already established in the Basin Plan. The proposed narrative pathogen objective specifies, in pertinent part, that pathogen indicator concentrations shall not exceed the numeric pathogen indicator objectives proposed and presented in Table 4-pio Pathogen Indicator Bacteria Objectives for Fresh Waters <i>as the result of controllable water quality factors</i>. The proposed amendments include a discussion of controllable and uncontrollable sources of pathogen indicator bacteria, and lists of sources that likely belong in each of these two categories. In broad terms, controllable sources are likely to be anthropogenic, while uncontrollable sources are likely to be of natural origin, including birds and other wildlife. The basic purpose of these proposed provisions is to explain that in regulating waste discharges that may affect pathogen indicator bacteria quality in receiving waters, it is neither appropriate nor the Regional Board's intent to require dischargers to take actions to correct uncontrollable sources. Where we can demonstrate that uncontrollable sources are the cause of the violation of receiving water objectives, then we would take appropriate regulatory steps to recognize that and</p>

	<p>continue to require that permittees focus implementation efforts on those sources that are controllable. We would not find dischargers in violation of waste discharge requirements if it is demonstrated that exceedances of receiving water objectives are not the result of permitted discharges but, rather, the result of uncontrollable sources.</p>
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Response to February 27, 2012 Comments by Orange County Coastkeeper

Orange County Coastkeeper's comments (signed by Ray Heimstra, Associate Director) state the organization's support of the proposed amendments and include the following clarifying comments:

1. Coastkeeper notes the extensive discussion of the development of the USEPA recommendations for bacteria standards over time and points out that the Task Force agreed on the use of a 126/100mL geomean for REC1 waters, which equates to an approximate illness level among swimmers of 8/1000. The Task Force chose this level for several reasons, "with the primary reason to provide the same level of protection for swimmers in this region as is provided in the rest of the state and most of the country." Coastkeeper notes the staff report discussion of USEPA guidance, which indicates that USEPA will accept an illness rate of "eight to ten per thousand as being just as protective as the current fecal coliform standard the proposed amendments replace. While this may be statistically correct, there can be no doubt that the adoption of a higher geomean (which correlates to a higher illness rate) would result in a larger number of sick swimmers and set the Santa Ana Region apart as having the weakest recreational water quality standard in the state. Coastkeeper rejects the idea that a geomean above 126 MPN/100mL is adequately protective of primary contact recreation." Coastkeeper reiterates support for the recommendation of 126/100mL as the primary contact recreation standard.
2. Coastkeeper notes that the compliance cost analysis done by CDM was intended as a worst case scenario (cost wise) that "assumed that the primary recreational

1. Coastkeeper's comments on the proposed amendments were discussed with Mr. Heimstra at the Stormwater Quality Standards Task Force meeting on March 1, 2012. As discussed at that time, the intent of the January 12, 2012 staff report discussion was to provide background information concerning USEPA's guidance and recommendations re bacteria criteria for recreational waters and, thereby, to place the recommendations in the proposed amendments in proper context. That is that while a less stringent geometric mean based on the higher risk level would be approvable, based on USEPA guidance, the proposed amendments incorporate the more stringent value. [The January 12, 2012 staff report also takes note of USEPA draft 2011 revised bacteria guidance, which would recommend that a single *E. coli* geometric mean (126/100mL) be used for REC1 waters.] Again, the proposed Basin Plan amendments (Attachments 1 and 2 to Resolution No. R8-2012-0001) include the recommendation for the 126/100mL geometric mean for *E. coli* for REC1 waters.
2. CDM's compliance cost analysis does represent a "worst case" scenario. It was intended to represent the probable cost of the "No Action" alternative, i.e., that the proposed amendments are not adopted and the MS4 permittees

uses standard had to be met at all locations in every water using only one type of Best Management Practice (BMP), diversion to a treatment plant. This resulted in a greatly exaggerated cost estimate for compliance with the recreational uses standards.

“...one of the goals of the proposed Basin Plan Amendments is to remove the necessity to meet primary recreation standards in the areas where they do not occur”.... “The [cost] analysis does not consider the most likely scenario to meet water quality standards which would include a variety of conservation measures, including new regulations and BMPs along with infiltration and recycling efforts that would....offset much of the cost of implementation. So the real cost for implementation of an effective set of BMPs to meet water quality standards in the proposed Basin Plan Amendments may be less than 10% of the cost estimate from the CDM study. Using this estimate, the costs of compliance are relatively low.”

“Also, paragraph two on page 106 that attempts to break down the cost benefit per swimmer is complete speculation and should be deleted from the proposed BPA.”

would be required to achieve the fecal coliform objectives and, for those dischargers affected by the adopted bacteria indicator TMDL for the Middle Santa Ana River watershed, the TMDL wasteload allocation of 113/100mL at each and every outfall. CDM’s analysis assumed that the only way consistent compliance with the fecal coliform objectives/TMDL WLAs could be achieved would be to divert runoff through a POTW.

Board staff agrees that the costs of compliance of implementing the proposed amendments would be considerably less than the “No Action” alternative.

The discussion of economics, including costs of compliance and information concerning the monetary benefits of compliance, is included in the January 12, 2012 staff report only, not in the draft Basin Plan amendments. The high degree of difficulty in estimating costs precisely is acknowledged in that report. Please see p. 102 of 106, Factor (d): Economic considerations, second paragraph. As noted in therein, the economic analyses conducted by the Stormwater Quality Standards Task Force endeavored to address a range of potential economic effects of the proposed amendments.

3. "Coastkeeper has concerns about the maps referenced on page sixty nine of the proposed BPA identifying the modified and engineered flood control channels. We feel that these maps overestimate the amount of area that is maintained for "flood control". Many of the areas identified as flood control channels, including large sections of Temescal Creek and many other locations are in reality largely natural areas that have important habitat and wildlife values."

"As a trained cartographer, I am aware of the difficulty of adequately displaying such large areas at a resolution that allows the accurate representation of flood control facilities. However, these maps were devoid of essential information such as stream names and the type of flood control facility being represented to the point of making them useless for determining their accuracy."

"These distinctions are important as many of the natural areas identified on the map are or could be habitat restoration or species recovery areas where the designation of the area as a flood control facility would endanger or eliminate the ability to receive funding for habitat and species restoration projects. So while we would support the use of these maps for delineating the areas that would be subject to a high flow suspension for recreational uses, the Regional Board should state that this is the only intended use of the maps presented in this proposed BPA and that they were not intended to and do not present an accurate representation of the natural areas interspersed within the flood control facilities represented on the maps."

3. This issue was discussed at the Stormwater Quality Standards Task Force meeting on March 1, 2012. It was agreed that the maps would be reviewed to assure that the streams identified conform to the proposed suspension criteria and to enhance clarity. It was confirmed that there was no underlying intent to include streams where the criteria would not apply.

To address the concern about the potential preclusion of habitat/species restoration projects in the stream channels identified on these maps, additional language is proposed to be added to the Basin Plan amendment. The draft language was discussed at the March 1, 2012 meeting of the Task Force and reads as follows: [language to be added to the discussion of the high flow suspension proposed to be added to Chapter 5 Implementation of the Basin Plan in the subsection entitled "Delineation of Engineered or Modified Channels"]

"It is important to recognize that while these channels have been engineered or modified for flood control purposes, these changes do not necessarily preclude the support of habitat in and adjacent to the channels, or the use of that habitat by aquatic, avian and terrestrial wildlife. There may be opportunities for habitat and/or species restoration projects in or adjacent to these channels. The temporary suspension of recreation standards in these channels would have no effect on the ability to implement such projects."

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<p>#1. p. 1, ¶ 1: “The Regional Board’s submission arrives at an inopportune time. As you know, the United States Environmental Protection Agency (USEPA), as required by the Clean Water Act (CWA), developed and published draft Recreational Water Quality Criteria (Office of Water 820-D-11-002) in 2011. This document provided USEPA’s recommended CWA Section 304(a) Recreational Water Quality Criteria.”</p>	<p>The draft 2011 Recreational Water Quality Criteria published by the Office of Water includes the following disclaimer: “This information is distributed solely for the purpose of obtaining scientific views on the content of this document. It does not represent and should not be construed to represent any final agency determination or policy.” [emphases added] Furthermore, in subsequent commentary in its February 23, 2012 letter, EPA Region 9 refers to the USEPA’s “Ambient Water Quality Criteria for Bacteria – 1986” as the “current” guidance, and to the draft 2011 Recreational Water Quality Criteria document as “proposed” guidance, or “draft proposed guidance”. Regional Board staff agrees that the applicable guidance is currently found in the approved and published 1986 guidance.</p>
<p>#2. p.1, ¶ 1: "EPA Region 9 has concerns with some of the Regional Board's proposed amendments. Our primary concern is that human health may not be adequately protected under the proposed revisions."</p>	<p>EPA Region 9 does not explain or substantiate the basis of this public health concern and does not identify the specific proposed amendments that trigger it. The proposed amendments implement USEPA’s 1986 Ambient Water Quality Criteria for Bacteria – 1986 (1986 criteria) in a manner consistent both with USEPA guidance (e.g., EPA Fact Sheets concerning the selection of risk levels and using single sample maximum values (both August 2006; see references in the January 12, 2012 staff report, Section 12)) and with EPA regulation implementing the 1986 criteria for the Great Lakes and coastal recreation waters (BEACH Act Rule, 2004). The federal guidance explicitly states that adoption of EPA’s recommended criteria will adequately protect human health. Presumably, EPA’s promulgation of these criteria in the BEACH Act Rule fulfilled or was intended to fulfill this purpose. In addition, EPA has previously approved nearly identical standards in numerous other states. Is it now EPA Region 9’s contention that the criteria recommended in EPA’s 1986 guidance, promulgated in the BEACH Act Rule and approved in other states, are not fully protective of human health?</p> <p>Board staff believes that the proposed amendments, if approved and implemented, would provide superior public health protection to the recreation standards now</p>

¹ Note: On two occasions shortly after receipt of the EPA Region 9 comments, Regional Board staff requested that EPA Region 9 staff retract their February 23, 2012 comment letter on the grounds that many of the comments provided were not clear or substantiated, making responses by Regional Board staff speculative. These requests were declined (see March 1, 2012 e-mail correspondence between Joanne Schneider (Regional Board staff) to Janet Hashimoto (EPA Region 9)). A meeting of Regional Board, State Board and EPA Region 9 staff was held on April 10, 2012 to discuss the comments. In part, this discussion formed the basis for a number of the changes to the January 12, 2012 draft Basin Plan amendments that are shown in an Errata Sheet (dated April 23, 2012). These responses are directed to the February 23, 2012 comment letter. However, where appropriate, references to changes made in response to further consideration, including the April 10, 2012 discussion, are also included.

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	<p>established in the Basin Plan, for two main reasons. First, the Basin Plan bacteria quality objectives based on fecal coliform, now disavowed by USEPA (as reflected in USEPA's 1986 bacteria guidance), would be replaced with objectives based on one of the bacteria indicators (<i>E. coli</i>) now recommended by USEPA. Second, the proposed amendments include a suite of other recommended recreation standards changes (e.g., changes in REC1 designations, supported by Use Attainability Analyses) and implementation strategies (including the temporary, high flow suspension of recreation standards) that would allow and encourage priority actions to protect public health and recreation uses where people are most likely to be exposed.</p> <p>Assertions regarding a possible failure to protect public health are serious and not responsible unless accompanied by specific and detailed substantiation, which EPA Region 9 failed to provide.</p>
<p>#3. p. 1, ¶ 2, re REC1 definition: "We recommend that the Regional Board not change the Beneficial Use name from "Water Contact Recreation" to "Primary Contact Recreation." Retaining the current name and definition would be consistent with the SWRCB name and definition for REC1. The current REC1 definition was developed through an extensive collaborative effort between the State Board and USEPA in order to have a consistent statewide definition of REC1."</p>	<p>Recommendation noted. Based on discussion with EPA Region 9 staff, Regional Board staff understands that EPA Region 9 would not object to the revised definition proposed in the January 12, 2012 Basin Plan amendment documentation, provided that the revised definition would be applied on a statewide basis. We agree that the REC1 definition should be revised on a statewide basis: the changes to the definition proposed in the January 12, 2012 documentation provide clarification of terms that may otherwise be misinterpreted. We believe that the January 12, 2012 recommended changes should be considered on a statewide basis. It should be noted that the amendments proposed in the January 12, 2012 Basin Plan amendment documentation would not result in any substantive changes to the definition of REC1. Board staff believes that the phrase "reasonably possible" in the current statewide definition has long been understood to convey the same level of probability and is synonymous with the term "likely" in the definition of primary contact recreation used in federal guidance and regulation. However, in practice, the latter term has been shown to be more precise and less vulnerable to misinterpretation. Therefore, the sole purpose of the revisions proposed in the January 12, 2012 Basin Plan amendment documentation is to express the original meaning and intent of the original definition more clearly. Doing so would ensure that USEPA's recommended bacteria criteria are applied in a manner consistent with federal guidance and with the conditions and assumptions underlying the epidemiology studies that USEPA relied on to derive the recommended <i>E. coli</i> criteria. Board staff believes that more precise language is needed to "avoid different definitions, interpretations and implementation" just as EPA Region 9 suggests in the last paragraph of its comment letter.</p>

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	<p>[Note: At the April 10, 2012 meeting, EPA Region 9 staff acknowledged that the principal party with regard to approval of the proposed revisions to the REC1 definition is the State Board. In response to comments provided by State Board staff at the April 10, 2012 meeting that consideration of changing the definition should be considered on a statewide basis to assure consistency, a revised approach is now being recommended, as reflected in the Errata Sheet. The name “Primary contact recreation” would be added as an optional way to identify this use, rather than as a replacement to the current name of the REC1 use (i.e., Water contact recreation). No clarifications of the definition itself would be made. Instead, narrative language is proposed to clarify what is understood with regard to the nature of recreational activities that constitute REC1 use.]</p>
<p>#4. p.1, ¶ 3, re re-designation based on UAAs: "EPA is not opposed to reclassification of recreational water bodies. However, we find that the rationale in most instances was not clear or substantiated."</p>	<p>EPA Region 9 does explain or substantiate this finding. This statement raises the question of what documentation associated with the proposed amendments implementing UAAs has been reviewed by EPA Region 9. A comprehensive Use Attainability Analysis (UAA) was performed on all waterbodies where the Regional Board proposes to revise the designated recreational uses. UAA Technical Reports, providing basic technical data (channel morphology, water quality, flow characterization, recreational use survey information (including the results of extensive photographic surveys), etc.) were prepared by CDM, one of the Task Force consultants. These reports are part of the administrative record for this matter. CDM was charged with assembling the relevant data and information, but <u>not</u> to draw any conclusions regarding the propriety of the designated uses. Interpretation of the data was left to Regional Board staff. Using the information provided in each of these technical reports, Regional Board staff prepared stand-alone UAA staff reports for each of the waters considered, with appropriate cross-references to other detailed reports in the administrative record. These UAA reports are subsections to the January 12, 2012 staff report for the proposed amendments. Each of these UAA staff reports identifies the specific factor(s) used to justify the reclassification as required by 40 CFR 131.10(g). The UAA Technical and Board staff Reports also provide extensive evidentiary support for each factor cited. Historical records were reviewed and extensive video surveys were conducted at each location to confirm that, in fact, REC1 is not an existing use, as defined in federal regulation, and that no water contact recreation was occurring in the stream segments recommended for re-designation. The level of UAA documentation collected and reviewed by the Santa Ana Regional Board is equal to or exceeds that which the State</p>

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	<p>Board relied on to reclassify Ballona Creek. It may be noted that EPA Region 9 approved the redesignations for Ballona Creek without reservation.</p>
<p>#5. p. 1, last ¶, p.2, first ¶, re MUN exceptions: "Federal regulations prohibit removal of designated uses which are existing uses, as defined in 40 CFR Sect. 130.3, unless a use requiring more stringent criteria is added, or another provision of 40 CFR Sect. 131.11(h) is shown to be applicable. Documentation is lacking showing the newly excepted waterbodies do not have existing MUN use designations."</p>	<p>It should be self-evident that the significant influence of marine waters makes certain of the waters proposed to be added to the list of surface waters identified in the Basin Plan unsuitable as a source for municipal drinking water supply, now and historically. These waters include: the tidal prisms of the Santa Ana Delhi and Greenville-Banning channels, the Huntington Beach wetlands, and the Los Cerritos wetlands. As indicated in the January 12, 2012 staff report, there is no evidence that MUN is an existing use in any of the other waters proposed to be added, i.e., other reaches of the Santa Ana Delhi and Greenville-Banning channels, Mystic Lake, Goodhart Canyon Creek, St. John's Canyon Creek and Cactus Valley Creek.</p> <p>[Note: At the April 10, 2012 meeting, EPA Region 9 staff expressed their belief that the matter of the MUN designations for the waters proposed to be added to the Basin Plan rests with the State Board, pursuant to the Sources of Drinking Water Policy. State Board staff indicated their concurrence with the recommendations regarding the marine-influenced waters and advised that the State Board is considering carefully exceptions based on the exception criterion for channels modified to convey stormwater runoff that is specified in the Sources of Drinking Water Policy. (This criterion is one basis for recommended MUN exceptions for the Santa Ana Delhi Channel and Greenville-Banning Channel.) Board staff advised that we propose to revise the recommendation to except the MUN designation for Mystic Lake, Goodhart Canyon Creek, St. John's Canyon Creek and Cactus Valley Creek to specify intermittent MUN as an existing or potential use since we lack adequate data to assert a compelling case that these waters are incapable of supplying a water supply well that can produce a minimum of 200 gallons per day on a sustained basis (this is another of the exception criteria specified in the Sources of Drinking Water Policy). The propriety of this MUN designation for these waters should be re-evaluated based on additional data in the future.]</p>

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#6. p.2, ¶ 2, re deletion of fecal coliform and addition of *E. coli* objectives: "EPA's 1986 guidance recommends that states and tribes replace existing fecal coliform bacteria standards with *E. coli* criteria. We support the criteria submitted for the *E. coli* geometric mean. We support the use of UAAs to classify waters as REC2. However, we do not support the elimination of the REC2 objectives."

Regional Board staff propose to replace existing fecal coliform bacteria objectives with *E. coli* objectives based on USEPA's 1986 recommended criteria. EPA Region 9's support for the proposed *E. coli* geometric mean is noted. However, EPA Region 9 does not explain the basis for declining to support the elimination of the REC2 objectives. This position is inconsistent with the explicit acknowledgment by USEPA that there are insufficient scientific data to establish an appropriate *E. coli* (or any other bacterial indicator) standard for REC2 (effectively, 'secondary contact' waters in federal parlance).

*"EPA explored the feasibility of scientifically deriving criteria for secondary contact waters and found it infeasible for several reasons. In reviewing the data generated in the epidemiological studies conducted by EPA that formed the basis for its 1986 recommendations, EPA found these data would be unsuitable for development of a secondary contact criterion. Secondary contact recreation activities generally do not involve immersion in the water, unless it is incidental (e.g. slipping and falling into the water or water being inadvertently splashed in the face). While the main illness likely to be contracted during primary contact recreation is gastrointestinal illness, illness contracted from secondary contact recreation activities may just a likely be diseases and conditions affecting the eye, ear, skin, and upper respiratory tract. Because of the different exposure scenarios and the different exposure routes that are likely to occur under the two different types of uses, EPA is unable to derive a national criterion for secondary contact recreation based upon existing data."*²

The REC2 objectives currently included in the Basin Plan are based on arbitrary multiplication of the fecal coliform objectives for REC1 waters. Applying this approach to the establishment of REC2 objectives would not now likely pass requisite scrutiny by independent peer reviewers. Further, per EPA's criteria guidance, reliance on fecal coliform objectives to protect even REC1 waters is no longer appropriate. Because EPA has repudiated the relationship between fecal coliform and exposure-related illness among swimmers, there is no defensible scientific basis to retain the current REC2 objectives.

2 U.S. EPA. Implementation Guidance for Ambient Water Quality Criteria for Bacteria [Draft]. May, 2002; pg. 39; draft document was cited by EPA in 69 FR 220, 67218 (Nov. 16, 2004). Moreover, EPA offers this as a statement of fact not policy and later reaffirmed this factual conclusion in the BEACH Act Rule.

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<p>#6. p.2, ¶ 2: (continued)</p>	<p>"In EPA's view, it would not be reasonable to rely on the equivocal discussion regarding after-the-fact approximation of an illness rate for fecal coliform in light of the unequivocal conclusion of the entire document [Ambient Water Quality Criteria for Bacteria – 1986]: That the fecal coliform criteria for recreation is (<i>sic</i>) not a reliable indicator of illness to swimmers."³</p> <p>It should be noted that 2 of the nine Regional Boards in California have not specified numeric bacteria objectives in their respective Basin Plans to protect REC2 uses. To date, EPA Region 9 has apparently accepted these omissions.</p>
<p>#7. p. 2, ¶ 3, re REC1 Tiers: "EPA's current guidance allows for the adjustment of single sample maxima for waters where use is not frequent. However, in the 2011 Recreational Water Quality Criteria Guidance we are no longer recommending multiple "use intensity" values, in an effort to increase national consistency across bodies of water and ensure equivalent health protection in all waters. EPA's proposed criteria remove the tiering component partly because of confusion by the states on its application."</p>	<p>Comment noted. See also response to comment #1. The draft 2011 guidance to which EPA Region 9 refers is a draft document that has no legal authority. In addition, although the draft 2011 guidance no longer recommends multiple use intensity values, the draft guidance also does NOT prohibit the states from continuing to do so. USEPA promulgated the exact same use intensity values in the BEACH Act Rule that the Regional Board staff now recommends. EPA Region 9 staff advised Regional Board staff that the BEACH Act Rule provided the most relevant guidance with respect to USEPA's expectations regarding implementation of the current and applicable 1986 criteria guidance.</p> <p>The argument for "national consistency" does not comport with explicit, contrary language in the BEACH Act Rule:</p> <p><i>"EPA does not consider the benefits of identical standards in the States and Territories covered by this rule to outweigh the negative effects of unnecessarily constraining the flexibility that the Clean Water Act and EPA's rules give States and Territories in establishing water quality standards..."⁴</i></p> <p>This conflict should be addressed explicitly in any final, revised bacteria quality criteria guidance that is issued.</p>

3 U.S. EPA. Water Quality Standards for Coastal and Great Lakes Recreational Waters – Final Rule. 69 FR 220, 67230 (Nov. 16, 2004).

4 U.S. EPA. Water Quality Standards for Coastal and Great Lakes Recreational Waters – Final Rule. 69 FR 220, 67227 (Nov. 16, 2004).

#7. p. 2, ¶ 3 (continued):

Moreover, USEPA/EPA Region 9's supposition that using only one single sample maximum value (proposed in the draft 2011 guidance to be called a "Statistical Threshold Value" (STV)) for all waters will provide "equivalent health protection for all waters" is only true if the underlying variability in bacteria densities in all waters is the same as that identified in USEPA's original epidemiology studies. Site-specific data from numerous creeks and streams throughout the Santa Ana Region show this assumption is demonstrably false. This should come as no surprise because the original epidemiology studies were conducted on freshwater lakes and reservoirs where bacteria levels vary far less than in the flashy western streams common to the Santa Ana Region. Application of a single "STV" that is derived after severely underestimating the true log standard deviation will result in water quality standards that are far MORE restrictive than intended as watersheds with naturally high levels of variability in bacteria densities will be forced to achieve much lower geometric means in order to assure compliance with BOTH the geomean and STV criteria that USEPA is proposing in the draft 2011 guidance. The practical effect will be anything but "equivalent" between states with vastly different stream characteristics.

USEPA's desire to address confusion in OTHER states does not provide a technical or legal basis to disapprove the application of use intensity tiers in the Santa Ana Region. The sole question for USEPA at this time is whether the proposed tier definitions are consistent with the applicable federal guidance. Since Regional Board staff proposes to rely on definitions essentially the same as those provided by USEPA in the BEACH Act Rule, there can be no question that the proposed Basin Plan amendments meet federal requirements. In addition, the Board staff has recommended to interpret USEPA's tier definitions very conservatively so that high intensity streams need not reflect the same level of use as nearby ocean beaches in order to qualify for the same tier protection. Specifically, as described in the January 12, 2012 staff report, Reach 3 of the Santa Ana River was used to define a high intensity (Tier A) REC1 water. Reach 3 of the River was then used as the baseline for determination of relative use intensity in other freshwater streams. An alternative and arguably appropriate approach would have been to assign Tier A status to ocean beaches, with actual REC1 use that is orders of magnitude greater than Reach 3 of the River, and to rank inland freshwater streams with lower use intensity (including Reach 3 of the River itself) accordingly. Thus, if anything, the proposed Basin Plan amendments provide greater health protection than might be accepted if EPA's definitions of high intensity use were applied more literally.

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<p>#8, p.2, ¶4, re temporary suspension: "We support lifting the REC uses for a specified amount of time after storms, but only at certain intensities and durations of rainfall and only in concrete-lined channels."</p>	<p>EPA Region 9 does not specify the "certain intensities and durations of rainfall" that it believes would support lifting REC uses. Regional Board staff is proposing a high flow suspension that is specified for a limited amount of time, under specified flow and/or rainfall conditions that result in hazardous conditions that, in turn, prevent attainment of REC uses on a temporary basis. While the suspension could arguably apply to any surface water when such hazardous conditions exist, the recommended suspension would apply to engineered channels, including concrete-lined channels, and other stream channels that have been heavily modified to convey flow downstream as quickly as possible.</p>
<p>#9, p. 2, ¶4, re temporary suspension: "The language the Regional Board uses to define where lifting of REC uses will occur is too broad. The definition of 'modified channels' can lead to use suspension in any water body where any vegetation has been removed or had any small modifications."</p>	<p>The language was not meant to convey that the suspension would apply to any surface stream that had minor modification or vegetation removal. As described to the Regional Board at the March 16, 2012 public hearing (no EPA Region 9 representative was present) and reflected in the Errata sheet, Board staff proposes to modify the terminology to indicate that the suspension would apply to streams that have been heavily modified so as to hasten downstream flow such that hazardous conditions that preclude attainment of REC uses occur. The manner in which the high flow suspension has been applied to Reach 2 of the Santa Ana River, a segment that is concrete-lined and very heavily modified, provides strong evidence of the Regional Board's good faith intent to be both reasonable and responsible on this matter.</p>
<p>#10, p.2, ¶4, re temporary suspension: "The maps provided by the Regional Board in Appendix VIII are riddled with red delineations and lack sufficient justification for selecting these waterbodies."</p>	<p>The large number of red delineations in the maps provided in Appendix VIII accurately reflects the very large number of concrete-lined flood control channels found throughout the Santa Ana Region. These are relatively low resolution maps comparable to some other figures in the Basin Plan and are intended to give a reader a general idea. Far more detailed maps are found in Appendix IX, which provides ArcGIS files of the streams to which the temporary suspension would apply. The decision criteria used to determine the streams to which the suspension should apply are nearly identical to those adopted by the Los Angeles Regional Board and subsequently approved by EPA Region 9. As noted in the accompanying staff report, federal guidance explicitly recommends the use of broad categorical exceptions where waterbodies share substantially similar characteristics.</p>
<p>#11, p. 2, ¶5, re enterococcus criteria: "The proposed amendment indicates that the Regional Board would implement the 2004 EPA enterococci criteria for coastal recreation waters (40 CFR 131.41)[BEACH Act rule] promulgation "on a best</p>	<p>Regional Board staff understands that the BEACH Act rule established numeric enterococcus objectives for coastal recreation waters, and nothing in the proposed amendments is intended to suggest otherwise. Rather, the use of the phrase "best professional judgment" is intended to reflect the fact that the BEACH Act rule did not provide specificity regarding the averaging period for those criteria, nor did the rule identify the REC1 use tiers to which each of the coastal recreation waters should be</p>

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<p>professional judgment basis". The enterococci criteria were promulgated as numeric objectives and are applicable for all designated marine recreational waters."</p>	<p>assigned for the purposes of identifying applicable single sample maximum (SSM) values. (Numeric SSM values are identified in the BEACH Act rule for four tiers of REC1 waters, which vary based on known or anticipated REC1 use.) Therefore, until such time as an appropriate averaging period and REC1 use tiers are assigned through a formal Basin Plan amendment process, it is necessary to apply best professional judgment to the application of the promulgated enterococcus criteria. The proposed amendment simply states this basic fact.</p> <p>[Note: During the April 10, 2012 meeting, EPA Region 9 staff indicated their expectation that the averaging period employed to express the enterococcus objective would be the same as that now typically employed, i.e., as a 30 day running average. This expectation is itself based on best professional judgment since, as stated above, there is no explicit statement of the appropriate averaging period in the BEACH Act rule. Further, both EPA Region 9 and State Board staff opined that in the absence of a standards setting process, tier decisions could not be made on a best professional judgment basis. Rather, under these circumstances, the applicable SSM would need to be assumed to be that for designated beaches/heavily used REC1 areas, i.e., the most stringent SSM. The Errata sheet proposes the removal of the reference to the application of best professional judgment, but Board staff has requested that State Board staff (and/or EPA Region 9 staff) provide the explicit statutory, regulatory or policy basis for the presumption that REC1 waters are designated beaches unless it is determined otherwise through a standards setting process. Such a presumption can lead to clearly inappropriate results. For example, part of Upper Newport Bay is an ecological reserve and REC1 activities are prohibited in the interest of wildlife/habitat preservation. It is not logical to presume that this area is a designated beach area, unless determined otherwise through a standards process.]</p>
<p>#12, p. 2, ¶5, p.3 top, re enterococcus criteria:"The 2011 EPA proposed guidance for marine waters suggests that the applicable criteria protective of recreation are: cultural enterococci at a geometric mean of 35 cfu per 100 mL and a Statistical Threshold Value (STV) of 104 cfu per 100 mL."</p>	<p>See response to comment #1, above.</p>
<p>#13, p.3, ¶1, re REC2 targets: "The procedures for the use of antidegradation to</p>	<p>This comment is not clear. Both the proposed amendments and the accompanying January 12, 2012 staff report make clear the expectation that the proposed REC2</p>

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<p>maintain water quality in REC2 waters is (<i>sic</i>) not clearly specified. Given the variability in bacterial counts, it is unclear how these waterbodies would be monitored to assess compliance with the narrative objective, or how the Regional Board could assure that this would be protective."</p>	<p>targets will be used to assess whether water quality conditions in REC2 only waters (of which there would be a very limited number, assuming that the UAA-based recommendations for these designations are approved) are declining over time. The specific procedures for calculating the targets are identified in both the staff report and proposed amendments. Monitoring will be required to assess whether these targets are being met (see the proposed monitoring language to be added to Chapter 5 IMPLEMENTATION of the Basin Plan – <i>Monitoring Plan for Pathogen Indicator Bacteria in Freshwaters</i>). This proposed language also speaks to the steps the Regional Board will follow should there be credible evidence that the targets are being exceeded. This follow-up is the appropriate and typically employed method to address evidence of water quality problems. It is not clear in what manner EPA Region 9 believes that this approach would not implement antidegradation requirements or fail to be protective of water quality conditions.</p> <p>It should be noted that the Regional Board approved a detailed bacteria monitoring and source identification program as part of the Middle Santa River bacteria TMDL, now being implemented, and more recently (February 2012) approved monitoring programs that are part of Comprehensive Bacteria Reduction Plans for Riverside and San Bernardino counties (part of the MS4 permit requirements). These are examples of the type of monitoring effort we expect to see expanded to protect REC1 uses throughout the watershed. Results to date have demonstrated the efficacy of these programs in directing control efforts.</p>
<p>#14, p.3, ¶ 2, re establishing REC2 targets: "The [antidegradation] procedures outlined do not provide assurance that water quality will be attained."</p>	<p>See response to comment #13. It should be noted that a similar antidegradation policy implementation approach has been used by the Santa Ana Regional Board to successfully prevent degradation in local groundwaters. Regional Board staff are not aware of any procedure adopted elsewhere to prevent water quality degradation by bacteria. Arguably then, the proposed Basin Plan amendment provides the highest level of assurance in the state.</p>
<p>#15, p.3, ¶ 2, re establishing REC2 targets: "Exceedence of the antidegradation-based objectives is when at least 5% of the samples exceed the 95% upper confidence interval of the data used in the original UAA. As water quality data are highly variable, this can lead to extremely high upper</p>	<p>First, Regional Board staff proposes that antidegradation targets, not objectives, apply to REC2- only waters. As USEPA and EPA Region 9 have acknowledged, there is no scientific basis for setting objectives to protect REC2 uses.</p> <p>It is well recognized that bacteria data are highly variable, which is what can result in very high, calculated 95% upper confidence level values. The values shown in the</p>

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<p>confidence limits (UCLs). For instance, for the Santa Ana River- New Delhi Channel tidal prism the UCL is greater than 6,000 cfu per 100 mL." To establish exceedances of this number, 5% of samples must exceed this value and the exceedance is only established after removal of outliers and establishment of a true trend."</p>	<p>proposed amendments, including those for the Santa Ana Delhi Channel tidal prism (this reach is mis-cited by EPA Region 9 as the "Santa Ana River – New Delhi Channel tidal prism"), are mathematical calculations based on the available data for this channel and reflect the variability of those data. Given the highly variable nature of bacteria concentrations in the flashy flows of local streams, it is not surprising that the 95% UCL is often quite high.</p> <p>The high degree of variability is presumably the basis for the preference stated in USEPA's 1986 bacteria criteria document for the use of site-specific log standard deviations when calculating applicable single sample maximum values. The procedure used to calculate the antidegradation targets is comparable.</p> <p>Regional Board staff does not understand EPA Region 9's apparent concern about establishing a true trend. The point of the targets and subsequent monitoring is to establish a true trend so that the need for corrective action can be ascertained properly. The inclusion of outliers in the target calculation would be likely to drive the upper confidence levels higher and mask the true trend, which would be counterproductive.</p> <p>[Note: as discussed at the March 16, 2012 Regional Board hearing concerning the proposed recreation standards amendments, Regional Board staff recognizes that very high upper confidence levels/REC2 targets, though calculated through a straightforward mathematical process using actual ambient quality data, can create the perception that water quality is not being adequately protected. Therefore, Board staff advised the Board at the March 16, 2012 hearing that we would revise the targets to reflect the 75% upper confidence level. This approach results in lower target values. From an implementation perspective, there is no substantive difference. The revised targets are shown in the April 23, 2012 Errata sheet]</p>
<p>#16, p. 3, ¶2 re establishing REC2 targets: "It is unclear how [the proposed antidegradation-based] standard could be evaluated when only periodic monitoring of REC2 waters is recommended."</p>	<p>Pursuant to the proposed amendments, a monitoring program would be developed and implemented upon Regional Board approval. The monitoring program must identify specific recommendations re REC2 targets. Where the results of periodic monitoring indicate that an antidegradation target is being exceeded, the Regional Board would require appropriate follow-up action, including supplemental accelerated monitoring to determine whether water quality degradation has, in fact, occurred. If there is credible evidence of a declining trend, then further investigation would be required. See also response to comment # 13.</p>

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<p>#17, p. 3, ¶3, additional comments: "EPA recommends the STV in the 2011 proposed criteria, rather than the term 'single sample maximum' to resolve previous inconsistencies in implementation."</p>	<p>See response to comment #1. If USEPA believes that some states are implementing the SSM improperly, it is incumbent upon USEPA to correct the error. If and when finalized as the official 304(a) criteria, the 2011 proposed criteria would serve as guidance to the states. There is no requirement that states be consistent with one another provided that each is implementing the standard in accordance with federal guidance.</p>
<p>#18, p.3, ¶3, additional comments: "Identical to the derivation of the SSM in the 1986 criteria document, the STV corresponds to an upper percentile (e.g. 75th percentile) of a water-quality distribution around the geometric mean."</p>	<p>EPA Region 9 is correct in noting that the "STV" recommended in the draft 2011 criteria document was calculated using the exact same data and equations that were previously used to derive the SSM values in the 1986 criteria document. As such, there is no new scientific data or analysis that underpins EPA's more recent (2011) recommendations. Nor does USEPA make any claim that the 1986 guidance is in error. Rather, it appears that USEPA merely wishes to standardize on one approach to be used by all states despite previously acknowledging (in the BEACH Act Rule) that the Clean Water Act does not require national consistency with regard to this issue (see response to comment #7). Further, applying the same SSM (or "STV") to all waters does not necessarily provide equivalent water quality and public health protection to all waters (see also response to comment # 7).</p>
<p>#19, p.3, ¶3, additional comments: "In order to be consistent with EPA's recommended criteria, the State standards should include both the geometric mean and STV."</p>	<p>Per published USEPA guidance, it is not necessary to include the SSM (or "STV", if included in final 304(a) guidance on this subject) as a compliance measure provided that the state implementation procedures explicitly describe how compliance will be assessed when there are insufficient data to calculate a geometric mean.⁵ EPA Region 9's assertion is in direct conflict with previous USEPA guidance that states the SSMs (or proposed "STVs") were never intended to be applied as independent water quality standards when there were sufficient data to calculate a proper geometric mean.⁶</p>
<p>#20, p. 3, ¶4 and p. 4, top, additional comments: "The formulation of the SSM the Regional Board uses is a misapplication of the USEPA criteria. The SSM in this formulation is dependent on the variability of the sample which can be very large which is partially why USEPA has abandoned the tiered approach in favor of a statistical approach consistent with the</p>	<p>EPA Region 9 does not explain how the formulation of the SSM in the proposed amendments is a misapplication of the USEPA criteria. Further, it is not clear whether EPA Region 9 refers to the established 1986 criteria or to the proposed 2011 draft criteria. The status of the 2011 draft criteria is described in the response to comment #1. Application of these proposed criteria in making SSM recommendations would be inappropriate at this time.</p> <p>In the established 1986 criteria guidance, USEPA explicitly recognizes sample variability and its importance in determining SSMs. First, USEPA states the preference for use of</p>

5 USEPA. Water Quality Standards for Coastal Recreation Waters: Using Single Sample Maximum Values in State Water Quality Standards. EPA-823-F-06-13 (Aug., 2006)

6 USEPA. Water Quality Standards for Coastal Recreation Waters: Using Single Sample Maximum Values in State Water Quality Standards. EPA-823-F-06-13 (Aug., 2006). Pg. 5

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<p>original epidemiology study."</p>	<p>site-specific data to determine the value of the log standard deviation to be used in the SSM calculation equation. A default value based on USEPA's epidemiology studies is to be used only where data are insufficient to calculate a site-specific value. Second, the SSM calculation equation itself is included in the 1986 guidance document. The BEACH Act rule also includes this equation and provides guidance on the number of samples that should be collected to determine a site-specific log standard deviation. The BEACH Act rule states further that sufficient guidance is provided by USEPA to allow calculation of site-specific SSMs without a standards-setting process. We note that other EPA regions have approved SSMs higher than those based on the default standards deviation values in other states (e.g., Texas). These SSMs were based on real-world data with higher variability. These SSMs were calculated in conformance with the method described in the BEACH Act rule.</p> <p>Consistent with the BEACH Act guidance, the proposed amendments include the SSM equation and require the minimum number of samples identified in the BEACH Act rule in order to justify the site-specific derivation of the log standard deviation (see Table 5-REC1-ssv, notes #2 and 5). Use of a site-specific log standard deviation would be considered through the Regional Board's normal public comment/participation process. (see Table 5-REC1-ssv, note #5).</p> <p>The nature of the argument in the last phrase ("which is partially why USEPA....original epidemiology study") is not clear. Is EPA Region 9 suggesting that the tiered approach that was previously recommended in the 1986 304(a) bacteria criteria document and that USEPA promulgated in the BEACH Act Rule was actually inconsistent with the original epidemiology studies? Regional Board staff understands that USEPA has been unable to locate the original study data when asked to provide copies under the Freedom-of-Information Act (FOIA). If EPA Region 9 is now in possession of that data we hereby request complete copies so that we may confirm what level of variability was present at the time the studies were conducted and how the variability compares to that observed in the Santa Ana Region.</p>
<p>#21, p. 4, top, additional comments: "EPA Region 9 is also concerned that the SSM values are in the implementation section of the Basin Plan. Any derivation of the SSM from the default values are a standards change and should be included in the water</p>	<p>As USEPA explains in its 2006 guidance memorandum concerning the application of SSMs, SSMs should only be used when there are insufficient data available to calculate a proper geomean. The SSM is not a new or different water quality standard, it is an alternative method for evaluating compliance with a geometric mean under certain data-limited conditions. The proposed Basin Plan amendments establish an <i>E. coli</i> objective expressed as a geomean and set forth a mandatory procedure to assess compliance</p>

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<p>quality objectives section and would be subject to EPA approval."</p>	<p>when there are insufficient data to calculate a geomean. This procedure entails the use of SSM values. This proposed procedure is identified both in the water quality objectives chapter of the Basin Plan (see Table 4-pio, note #3) and in the implementation chapter (see Table 5-REC1-ssv, note #1). This approach is entirely consistent with federal guidance which states:</p> <p style="text-align: center;"><i>"States retain discretion to determine whether and how to use the Single Sample Maximums in other Clean Water Act programs"</i></p> <p>The BEACH Act rule makes clear that the derivation of site-specific SSMs is not subject to a standards setting process. (see p. 67227 of the rule; see also the response to comment #20).</p>
<p>#22, p. 4, 1st full ¶, "EPA observes that the Regional Board has struck some language regarding site specific objectives (SSO) for copper, cadmium and lead in the middle Santa Ana River..."EPA Region 9 would like to make clear that EPA did not approve [the metals] SSOs (letter to the Regional Board dated May 30, 2000)."</p>	<p>Substantive changes to the Basin Plan regarding metals objectives for the Santa Ana River are beyond the scope of the proposed amendments. Changes to this language are proposed simply in order to (1) correct the spelling of one word ("formulas" to "formulae") and (2) change footnote notation. The latter change is necessary to accommodate new footnotes that are proposed to be added to the Basin Plan after the metals footnote.</p> <p>In the interest of clarity, it should be noted that EPA Region 9 offered the Santa Ana Region the option of approving the SSOs or accepting the standards proposed in the California Toxics Rule. EPA Region 9 made it very clear that they could and would approve either approach for the Santa Ana. The Santa Ana Regional Board staff consulted with local stakeholders and informed EPA Region 9 that either approach would be acceptable provided that the site-specific metals translators that were developed and approved by the Regional Board at the same time the SSOs were adopted could continue to be used to derive appropriate effluent limits in NPDES permits. EPA agreed and the State Implementation Policy contains a specific provision allowing continued use of metals translators that were developed and approved prior to the adoption of the SIP.</p>
<p>#23, p. 4, ¶2, additional comments: "In 2007, we provided the Regional Board with</p>	<p>EPA Region 9 does not specify those parts of the Strawman proposal that it believes were not addressed. The Strawman Proposal previously submitted for EPA Region 9's</p>

7 USEPA. Water Quality Standards for Coastal Recreation Waters: Using Single Sample Maximum Values in State Water Quality Standards. EPA-823-F-06-13 (Aug., 2006). Pg. 1

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<p>comments on the "Strawman Document: Recommended Revision to Santa Ana Region's Basin Plan for Recreational Use Classification and Related Water Quality Objectives". Many of our comments and recommendation have not yet been addressed."</p>	<p>consideration was substantially revised in direct response to EPA Region 9's comments. A separate document is appended to this response that describes the specific changes made in response to each of the comments we received from EPA Region 9 in 2008 (see below). As reflected therein, Board staff believes that all of the comments and recommendations provided by EPA Region 9 were considered seriously and resulted in substantive changes that are reflected in the proposed amendments.</p>
<p>#24, p. 4, ¶3, additional comments: "EPA supports the State Board's effort to adopt statewide standards for recreational beneficial uses that are consistent statewide. We strongly recommend that the Regional Board work with the State Board on this statewide effort to avoid different definitions, interpretation and implementation of standards to protect human health."</p>	<p>Recommendation noted. Regional Board staff have provided comments to State Board and other regional board staff on preliminary proposals for establishing and implementing bacteria objectives, and we anticipate continuing to participate in this effort.</p> <p>Board staff firmly believes that the proposed amendments are fully consistent with applicable guidance and will result in public health and beneficial use protection that is superior to the established Basin Plan standards. For this reason, it is imperative that consideration and approval of these amendments proceed without delay and ahead of the statewide effort, which has been and will likely be delayed as we await the outcome of USEPA's development of revised bacteria criteria guidance.</p> <p>For the record, we note that the Clean Water Act requires that uses be protected, not that the specific approach to providing that protection be consistent from place to place.</p>

**Comparison of 2007 Strawman Proposal and revised 2012 Recreation Standards Amendments Proposal
Revising the Definition of REC1**

2007 Strawman Proposal	EPA Comments on Strawman Proposal	2012 Basin Plan Amendment	Revisions Made to Address EPA Concern
<p><i>"REC1 - Primary Contact Recreation: waters used for recreational activities involving frequent and prolonged water contact, especially by children, where ingestion of water is likely. Examples of Primary Contact Recreation include, but are not limited to: swimming, water-skiing, surfing, whitewater rafting, float-tubing, bathing in natural hot springs, skin and scuba diving. All defined waters of the U.S. are presumed to be capable of supporting primary contact recreation unless a Use Attainability Analysis (UAA) demonstrates that this use has not been attained and is not attainable and the Basin Plan is revised accordingly."</i></p>	<p>The proposed changes have the effect of altering the thresholds for REC1 use designations, rendering them less protective...</p> <p>1) By using the phrase "frequent and prolonged use" to define REC1...</p> <p>2) By removing "fishing and wading" from the current definition of REC1 activities...</p> <p>3) By changing the threshold for water ingestion from "reasonably possible" to "likely."</p> <p>EPA also notes that:</p> <p>"The current REC1 definition was the product of an intense collaborative effort by the State Water Resources Control Board and the Regional Water Quality Control Boards and the USEPA to develop a consistent statewide definition for the REC1 use."</p>	<p><i>"Primary Contact Recreation (REC 1*) waters are used for recreational activities involving deliberate water contact, especially by children, where ingestion is likely to occur. Examples of REC1 activities may include, but are not limited to, swimming, water-skiing, surfing, whitewater rafting, float tubing, bathing in natural hot springs, skin diving, scuba diving and some forms of wading and fishing. Brief incidental or accidental water contact that is limited primarily to the body extremities (e.g. hands and feet), is not generally deemed Primary Contact Recreation because ingestion is not likely to occur."</i></p> <p><i>"The definition of the REC1 use was also updated to improve clarity and precision, and new bacteria quality objectives, based on USEPA's recommended E. coli criteria (1986), were adopted for fresh inland surface waters (see Chapter 4, pathogen indicator bacteria objectives for inland surface waters). The minor revisions to the REC1 definition neither broadened nor reduced the intended scope of the prior REC1 definition. Rather, the sole purpose was to ensure that objectives based on the USEPA bacteria quality criteria are applied in a manner that is consistent with the specific exposure assumptions (including the nature of recreational activities) described in USEPA's criteria document and related guidance."</i></p>	<p>1) The phrase "frequent and prolonged" use was deleted at EPA's suggestion.</p> <p>2a) All types of fishing where ingestion is likely to occur (e.g. instream fly-fishing) will continue to be included in the definition of REC1 activities as they always have been. Dock-fishing, boat-fishing and shoreline fishing involving only brief incidental water contact to the hands and feet will continue to be considered REC2-type activities as they always have been.</p> <p>2b) Any form of wading where ingestion is likely to occur will continue to be included in the definition of REC1 activities as it always has been. Activities such as beachcombing, tide-pool study, dog-walking, rock-skipping, and similarly brief incidental or accidental water contact limited primarily to the hands and feet will continue to be considered REC2 activities as they always have been.</p> <p>3) The word "reasonably" in the phrase "reasonably possible" was originally intended to convey a level of probability that was synonymous with the term "likely." So, substituting the term "likely" is not meant to alter the threshold for water ingestion but, rather, to use the more precise language suggested in federal guidance to more accurately convey the original meaning and reduce the potential for misinterpretation. Additional explanation was added to the text of the proposed Basin Plan amendment to make this very clear.</p>

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2007 Strawman/2012 BPA Comparison: Use Attainability Analyses (UAA)

2007 Strawman Proposal	EPA Comments on Strawman Proposal	2012 Basin Plan Amendment	Revisions Made to Address EPA Concern
<p><i>"The Regional Board will consider a suite of factors when determining how best to classify a waterbody to protect recreational uses. The factors may include but are not limited to: flow conditions, ease of access, adjacent land uses, proximity to parks and/or residences, channel morphology and modifications, naturally-occurring sources of pollution or aesthetic restrictions, public safety concerns, the probable risk of ingesting water, parks and recreation plans, and the type of recreational activities that are occurring or have occurred in the waterbody since November 28, 1975 (i.e. 'existing uses'). Where the Regional Board determines, through a Use Attainability Analysis, that a waterbody cannot support any recreational uses (REC1 or REC2), that stream segment will be designated REC-X."</i></p>	<p>1) RB8 should identify which factors would be used in UAAs and how these relate to the six factors in 40CFR131.10(g).</p> <p>2) Under Factor 1, RB8 would need to show that natural sources prevent attainment of the use. This is similar to the approach used in RB4. For EPA approval, there must be a demonstration that the exceedances are due to natural sources (i.e. all human sources have been controlled).</p> <p>3) Under Factor 4 [EPA] would expect an analysis as to how hydromodification precludes the attainment of the use and why it is not feasible to restore the use to its "original" (i.e., the use that existed in November, 1975) condition.</p> <p>4) Under Factor 6 [EPA] would expect a demonstration that attainment would result in widespread economic and social impact.</p> <p>5) Land use by itself is not a factor in the UAA process.</p>	<p><i>"Pursuant to the federal Clean Water Act and implementing regulation, all defined waters of the United States are presumed to be capable of supporting Primary Contact Recreation and shall be designated REC 1 unless a Use Attainability Analysis (UAA) demonstrates that this use is not an existing use and is not attainable and the Basin Plan is revised accordingly. A suite of factors must be considered when UAAs are conducted to determine whether to downgrade or delete the REC 1 use from any waterbody. The relevant factors are identified in federal and state regulations."</i></p>	<p>1) The Basin Plan now states that the relevant factors that must be considered when conducting a UAA are identified in federal regulations as EPA suggested. The technical support document for each UAA now describes which of the six federal factors, and the specific scientific evidence, that were used to justify downgrading or deleting a recreational use.</p> <p>2) No revisions necessary because none of the UAA's recommended for approval relied on Factor #1 (naturally-occurring sources of pollution) to justify downgrading or deleting a REC1 use.</p> <p>3) The technical support document for each UAA now describes the specific hydromodifications that preclude attainment of the use in any given channel. Many of these channels were modified prior to November, 1975 or were man-made conveyances constructed after that date. In both cases, the current condition is the original condition.</p> <p>4) No revisions were necessary because none of the UAA's recommended for approval relied on Factor #6 (widespread economic and social impact) to justify downgrading or deleting a REC1 use.</p> <p>5) None of the UAA's cite land use, by itself, to justify downgrading or deleting a REC1 use. Land use is only considered as an element of Factor #3 (human caused conditions prevent attainment of the use) and the likelihood of future potential use.</p>

2007 Strawman/2012 BPA Comparison: *E. coli* Objectives for REC1

2007 Strawman Proposal	EPA Comments on Strawman Proposal	2012 Basin Plan Amendment	Revisions Made to Address EPA Concern												
<p>"Pathogen indicator concentrations shall not exceed the values specified in Table 1 (below) as a result of controllable water quality factors unless it is demonstrated to the Regional Board's satisfaction that the elevated indicator concentrations do not result in excessive risk of illness (i.e. greater than 8 gastrointestinal illnesses per 1000 swimmers) among people recreating in or near the water.</p> <p style="text-align: center;">Table 1: Pathogen Indicator Bacteria Objectives for Fresh Waters</p> <table border="1" data-bbox="191 732 630 1190"> <thead> <tr> <th data-bbox="191 732 394 833">Recreational Use Designation</th> <th data-bbox="394 732 630 833">Pathogen Indicator Objective</th> </tr> </thead> <tbody> <tr> <td data-bbox="191 833 394 971">REC1 and REC2</td> <td data-bbox="394 833 630 971"><126 <i>E. coli</i>/100 ml (30-day geometric mean of at least 5 samples)</td> </tr> <tr> <td data-bbox="191 971 394 1190">REC2-only</td> <td data-bbox="394 971 630 1190"><2000 fecal coliform/100 ml (30-day average of at least 5 samples) and <10% of samples >4000 fecal coliform/100ml</td> </tr> </tbody> </table> <p>The water quality objectives specified in Table 1 do not apply when designated uses are temporarily suspended due to unsafe flow conditions in the waterbody.</p>	Recreational Use Designation	Pathogen Indicator Objective	REC1 and REC2	<126 <i>E. coli</i> /100 ml (30-day geometric mean of at least 5 samples)	REC2-only	<2000 fecal coliform/100 ml (30-day average of at least 5 samples) and <10% of samples >4000 fecal coliform/100ml	<p>1) We [EPA] do not believe we can approve the standards change being proposed without a single sample standard for <i>E. coli</i>. In other EPA approvals, we have required adding single sample standards where only a geometric mean has been adopted.</p> <p>2) EPA guidance allows adjustment of single sample maxima for areas where use is less frequent.</p>	<p><i>"Lakes and Streams: Waste discharges shall not cause or contribute to excessive risk of illness from microorganisms pathogenic to human beings. Pathogen indicator concentrations shall not exceed the values specified in Table 4-pio below as a result of controllable water quality factors: [excerpt of Table; all the notes not included]</i></p> <table border="1" data-bbox="1043 505 1547 976"> <thead> <tr> <th data-bbox="1043 505 1262 695">Table 4-pio - Pathogen Indicator Bacteria Objectives for Fresh Waters¹ Recreational Use</th> <th data-bbox="1262 505 1547 695">Pathogen Indicator Objective (geometric mean of at least 5 samples in a 30-day period (running))²</th> </tr> </thead> <tbody> <tr> <td data-bbox="1043 695 1262 751">REC1-only or REC1 and REC2</td> <td data-bbox="1262 695 1547 751"><126 <i>E. coli</i> organisms per 100 mL³</td> </tr> <tr> <td data-bbox="1043 751 1262 976">REC2-only⁴</td> <td data-bbox="1262 751 1547 976">N/A; see <i>REC2 Only Freshwaters</i>, below, and Chapter 5, Recreation Water Quality Standards, <i>Antidegradation targets for REC2 only freshwaters</i></td> </tr> </tbody> </table> <p>³ ...For all other purposes related to implementing the Clean Water Act, if there are insufficient data to calculate a representative geometric mean for <i>E. coli</i>, "X%" of the representative sample data collected over a 30 day period (running) shall be less than the applicable Single Sample Maximum value, where X% is the statistical confidence level assigned to a particular waterbody. Where there are sufficient data to calculate a representative geometric mean for <i>E. coli</i>, the applicable Single Sample Maximum value shall not be used to assess compliance with the <i>E. coli</i> objective in Table 4-pio. The intent of Single Sample Maximum values is to inform public notification decisions and to trigger additional follow-up monitoring (see Chapter 5, Recreation Water Quality Standards, Application of Single Sample Maximum Values in REC1 Freshwaters).</p>	Table 4-pio - Pathogen Indicator Bacteria Objectives for Fresh Waters ¹ Recreational Use	Pathogen Indicator Objective (geometric mean of at least 5 samples in a 30-day period (running)) ²	REC1-only or REC1 and REC2	<126 <i>E. coli</i> organisms per 100 mL ³	REC2-only ⁴	N/A; see <i>REC2 Only Freshwaters</i> , below, and Chapter 5, Recreation Water Quality Standards, <i>Antidegradation targets for REC2 only freshwaters</i>	<p>1) The proposed <i>E. coli</i> objective is expressed as a geometric mean of at least 5 data points collected over a 30-day period (rolling average). The amendments now include EPA's recommended procedure for evaluating compliance with that objective when there are insufficient data to calculate a proper geometric mean (see Table 4-pio, note 3; see also Table 5-REC1-ssv, notes 2 and 5)). This approach is consistent with EPA's 2006 guidance regarding the use and application of Single Sample Maximum values. The SSM is not a "separate" water quality standard because none is needed. The SSM is a statistical translation of the geometric mean and is fully enforceable when there are insufficient data to calculate a representative geometric mean. The SSMs thus serve as both a standard (where there are insufficient data to determine a geometric mean) and a public notification tool, as was intended.</p> <p>2) The proposed Basin Plan amendment now includes different SSM values using the adjustments EPA recommended where use is less frequent. Tier assignments based on the known/anticipated frequency of REC1 use are proposed. The equation used to calculate SSMs is also included, with specifics regarding the number of samples that must be collected to justify</p>
Recreational Use Designation	Pathogen Indicator Objective														
REC1 and REC2	<126 <i>E. coli</i> /100 ml (30-day geometric mean of at least 5 samples)														
REC2-only	<2000 fecal coliform/100 ml (30-day average of at least 5 samples) and <10% of samples >4000 fecal coliform/100ml														
Table 4-pio - Pathogen Indicator Bacteria Objectives for Fresh Waters ¹ Recreational Use	Pathogen Indicator Objective (geometric mean of at least 5 samples in a 30-day period (running)) ²														
REC1-only or REC1 and REC2	<126 <i>E. coli</i> organisms per 100 mL ³														
REC2-only ⁴	N/A; see <i>REC2 Only Freshwaters</i> , below, and Chapter 5, Recreation Water Quality Standards, <i>Antidegradation targets for REC2 only freshwaters</i>														

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			<p>a site-specific log standard deviation (a variable in the SSM equation).</p> <p>3) The SSM method may also be used as an implementation procedure for evaluating compliance with the proposed narrative pathogen objective.</p>
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2007 Strawman/2012 BPA Comparison: Fecal Coliform Objectives for REC2

2007 Strawman Proposal	EPA Comments on Strawman Proposal	2012 Basin Plan Amendment	Revisions Made to Address EPA Concern
<p><i>"The current fecal coliform objective established to protect beneficial uses designated REC2-only should not be changed. However, some clarification from U.S. EPA is required regarding the most appropriate method for calculating an "average" for bacterial data.</i></p> <p><i>The historical record is unclear as to how the term "log-mean" was suggested for the Primary Contact criteria while the word "average" was selected for the Secondary Contact criteria. It is uncertain whether this was a deliberate choice intended to recommend different methods of calculation or not. Nor is it clear why, if the Secondary Contact criteria as originally derived by multiplying the Primary Contact criteria by 5x or 10x, the units should change. Therefore, the Task Force seeks some clarification from EPA:</i></p> <p><i>1) What is the most mathematically correct procedure for calculating the "average" for fecal coliform in order to assess compliance with the Secondary Contact criteria if the underlying data are log-normally distributed?</i></p> <p><i>2) If a footnote is added to the Basin Plan to describe the most mathematically correct procedure for calculating the fecal coliform average, does that constitute a revision of water quality standards or merely a clarification of an existing water quality objective in order to avoid confusion and misinterpretation during the implementation process?"</i></p>	<p>1) It is unclear why RB8 is not replacing the REC2 fecal objective with an E. coli objective.</p> <p>2) Having different indicators for different uses would seem to confuse the issue and could result in increased monitoring costs.</p> <p>3) We [EPA] believe that the term "average" for REC2 can be interpreted as a geomean. This would be consistent with the existing REC1 fecal standard. Such a clarification of the standards language would constitute a standards change.</p> <p>4) Use of the single sample maxima [solely] as a trigger for monitoring would require a standards change. We suggest that the language in the California Ocean Plan regarding single sample maxima could be used as a model.</p>	<p>The current fecal coliform objectives adopted for freshwaters designated REC2 are deleted from the Basin Plan.</p> <p>No numeric pathogen indicator bacteria objectives are proposed to replace the deleted fecal coliform objectives for freshwaters designated REC2.</p> <p>Waters designated both REC1 and REC2 would be governed by the proposed <i>E. coli</i> objectives (see Table 4-pio). For waters designated REC-2 only, bacteria quality targets are proposed in conformance with antidegradation policies. Exceedances of these targets would trigger additional monitoring and investigation.</p>	<p>1) The Regional Board is replacing the REC2 fecal coliform objectives with an E. coli objective because EPA has not yet recommended such a criterion pursuant to Section 304(a) of the Clean Water Act and there are insufficient scientific data available for the Regional Board to develop such an objective.</p> <p>2) The Regional Board agrees that having different pathogen indicators for different recreational uses may confuse the issue. Therefore, the Regional Board now proposes to delete the obsolete fecal coliform objectives from the Basin Plan.</p> <p>3) The clarification previously suggested in the Strawman document is no longer necessary because the obsolete fecal coliform objectives are being deleted in their entirety.</p> <p>4) The proposed Basin Plan amendments no longer limit the use of single sample maxima solely to serve as a trigger for additional monitoring. Instead, the proposed Basin Plan amendment would employ the SSMs as EPA recommends in the 1986 Bacteria criteria and the additional federal guidance published in 2006.</p> <p>5) Fecal coliform data can continue to be used to assess compliance with federal and state antidegradation policies.</p>

2007 Strawman/2012 BPA Comparison: Temporary High Flow Suspension

2007 Strawman Proposal	EPA Comments on Strawman Proposal	2012 Basin Plan Amendment	Revisions Made to Address EPA Concern
<p><i>"A footnote should be added to all freshwater rivers and streams designated as REC1 or REC2 in Table 3-1 of the Basin Plan; said footnote to state:</i></p> <p><i>"The REC1 and REC2 use designations are temporarily suspended when high flows, caused by stormwater runoff, preclude safe recreation in the stream channel. The temporary suspension is automatically terminated when flow conditions have returned to a safe level."</i></p> <p><i>The footnote would <u>not</u> be applied to lakes, reservoirs or ocean waters designated REC1 and/or REC2. The Regional Board will define what constitutes unsafe flow conditions using one or more of the following thresholds: 1) the U.S. Geological Survey's safe sampling standard, 2) the Swift Water Rescue safe access standard, 3) the Los Angeles Regional Water Quality Control Board's use suspension standard for temporary high flows, 4) or other objective indicators."</i></p>	<p>1) This is a reasonable approach, however the proposal is too vague as to what criteria would be used to define high flow... RB8 must provide the threshold hydrologic event values that would be used to initiate the high flow suspension...</p> <p>2) RB8 must provide the threshold values or duration limits that would signal the return of the use.</p> <p>3) We [EPA] are concerned that the high flow exclusion is not confined to specific engineered channels.</p> <p>4) We [EPA] agree that flow and velocity are important factors in estimating potential use of the waterbody for swimming but this is but one factor that should be considered. However, high flows may not preclude other recreational uses of the water where ingestion is possible (e.g. kayaking).</p>	<p><i>"Recreational use of certain inland surface waters is precluded under certain flow conditions that make recreational activities unsafe. Recreation use designations (and the applicable pathogen and pathogen indicator objectives) are temporarily suspended when such conditions exist.</i></p> <p><i>Definition of Unsafe Flows. Flow conditions in freshwater streams in the Santa Ana watershed are presumptively unsafe if either of the following conditions occurs: (1) stream velocity is greater than 8 feet-per-second (fps); or, (2) the product of stream depth (feet) and stream velocity (fps) (the depth-velocity product) is greater than 10 ft²/s. Where representative stream gauge data are not available, unsafe flows are presumed to exist in stream channels that have been engineered or modified for flood control purposes when rainfall in the area tributary to the stream is greater than or equal to 0.5 inches in 24 hours.</i></p> <p><i>Termination of Temporary Suspension. Stream flows will be presumed to return to safe conditions and the temporary suspension of recreation standards will cease 24-hours after the end of the storm event, unless actual flow data demonstrate that the suspension should terminate sooner or later than the default period. In such cases, the suspension terminates once stream flows (measured as cubic-feet/second or (cfs) have returned to the range of normal pre-storm conditions (cfs<98th percentile as calculated from a calibrated hydrograph for the stream).</i></p>	<p>1) The proposed Basin Plan amendment now includes specific threshold values that would be used to initiate the high flow suspension.</p> <p>2) The proposed Basin Plan amendment now includes specific duration limits and specific threshold values for stream flow that would terminate the temporary suspension of water quality standards for recreational uses.</p> <p>3) The proposed Basin Plan amendment now limits application of the temporary high flow suspension to specific channels that have been substantially modified to protect people and property from flooding.</p> <p>4) High flows like those that would trigger a temporary suspension of water quality standards represent such an extreme hazard that they effectively preclude safe recreational water contact of any kind. Kayaking is not known to occur under such conditions in creeks and streams of the Santa Ana region. The intrinsic risk associated with kayaking in channels during high flow conditions is far greater than the potential health hazard associated with temporarily suspending water quality standards during significant storm events.</p>

Responses to March 15, 2012 Comments from Heal the Bay^{1, 2}

<p>#1. Rename the REC1 Use from “Water Contact Recreation” to “Primary Contact Recreation”: “We urge the Regional Board to retain the current definition.”</p>	<p>Please see the response to 2-23-12 comments from EPA Region 9, # 3</p>
<p>#2. Delete fecal coliform objectives and replace with <i>E. coli</i> objectives: The Basin Plan should specify that a rolling geometric mean be calculated based on five samples collected over the last thirty days or the five most recent samples.</p> <p>“In addition, the Regional Board must include a single-sample limit of <i>E. coli</i> density of 235/100ml. This single sample is critical for both public health protection and compliance purposes. There is no justification as to why this criterion is absent in this proposal.”</p>	<p>The proposed amendments included a recommended objective for <i>E. coli</i> expressed as the geometric mean of at least 5 sample in a 30-day period (running). (“Running” is the equivalent of “rolling” in the context of the expression and implementation of the objectives). See proposed Table 4-pio-Pathogen Indicator Bacteria Objectives for Fresh Water.</p> <p>Single sample maximum values, including 235/100ml <i>E. coli</i>, are included in the proposed amendments. Single sample maximum values and their application are described in detail in the proposed amendments (see “<i>Application of Single Sample Maximum values in REC1 freshwaters</i>”, including Table 5-REC-ssv (Chapter 5), and Table 4-pio- Pathogen Indicator Bacteria Objectives for Fresh Water (table note 3)). The detailed rationale for these amendments is described in the January 12, 2012 staff report for the amendments. The proposed single-sample maximum related amendments are wholly consistent with established USEPA guidance and regulation, including the Water Quality Standards for Coastal and Great Lakes Recreation Waters; Final Rule (BEACH Act rule) (2004) and, as such, will assure public health and beneficial use protection. Please see also the responses to 2-23-12- comments from EPA Region 9, #19-21.</p>

¹ Heal the Bay acknowledges in their March 15, 2012 letter that the comments provided focus on the proposals as described in the Executive Summary of the proposed amendments only, due to time constraints.

² On April 20, 2012, Heal the Bay submitted additional comments concerning the Use Attainability Analyses components of the proposed amendments. These additional comments were appended to the March 15, 2012 comment letter. The amended comment letter was not signed. Responses to the additional comments will be prepared and provided at the April 27, 2012 hearing.

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<p>#3. Establish narrative pathogen objective: “It is unclear why the Regional Board would propose a narrative pathogen objective. The numeric recreational water quality criteria are based on health impacts. These numeric criteria should be sufficient to protect public health.”</p>	<p>The rationale for the proposed narrative pathogen objective is discussed in the January 12, 2012 staff report and explicitly in the proposed amendments (see the proposed narrative in CHAPTER 4 WATER QUALITY OBJECTIVES, INLAND SURFACE WATERS, Pathogen Indicator Bacteria, third paragraph). In short, the intent of the narrative objective is to provide the Regional Board an additional regulatory tool to employ in situations where data on pathogens or other bacterial indicators of the presence of pathogens, numeric objectives for which are not specified in the Basin Plan, provide evidence of actual or threatened impacts to public health and recreational uses. Board staff is at a loss to understand why Heal the Bay would object to such an objective; indeed, we believe that Heal the Bay should applaud it and encourage its adoption by other regional boards in the state.</p>
<p>#4 and #5: “Subdivide REC1 standards into tiers based on intensity of use”: “We urge the Regional Board to reject the proposal of a tiered approach based on intensity of use....USEPA states that “the 2012 RWQC [proposed Recreational Water Quality Criteria, published in draft in 2011] are no longer recommending multiple “use intensity” values, in an effort to increase national consistency...and ensure equivalent health protection in all waters”. Thus, one set of standards based on the same health protection is appropriate.”</p> <p>“..we are concerned with the Regional Board’s assessment that the single sample value is for posting purposes only...Both the single sample and the geomean standards play an important role in public health protection and compliance assurance. The Regional Board cannot simply decide to use one or the other. “</p>	<p>Please see the response to 2-23-12 comments from EPA Region 9 , #1 and 7.</p> <p>As specified in the proposed amendments (see “<i>Application of Single Sample Maximum values in REC1 freshwaters</i>”, including Table 5-REC-ssv (Chapter 5), and Table 4-pio- Pathogen Indicator Bacteria Objectives for Fresh Water (table note 3)), the principal use of the SSMs would be as a beach posting/closure decision-making tool. This is entirely consistent with the express purpose of the SSMs, as described in USEPA guidance and regulations (e.g., USEPA’s 1986 bacteria criteria document and the USEPA 2006 Fact Sheet concerning SSMs (see references in the January 12, 2012 staff report)). However, pursuant to the proposed amendments, SSMs would be used also for compliance purposes where there are insufficient data to calculate a</p>

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<p>“Any derivation of the single sample or geomean from default values are (<i>sic</i>) a standards change and would be subject to EPA approval.”</p>	<p>geometric mean for comparison to the geometric mean objective (once again, please see see “<i>Application of Single Sample Maximum values in REC1 freshwaters</i>”, including Table 5-REC-ssv (see note1) (Chapter 5), and Table 4-pio- Pathogen Indicator Bacteria Objectives for Fresh Water (table note 3)). The proposed amendments include both recommended geometric mean objectives and SSMS.</p> <p>This is not the case. Explicit confirmation to the contrary is provided in the BEACH Act rule (p.67227). See also response to 2-23-12- comment from EPA Region 9, #21.</p>
<p>#6. Temporary suspension of bacteria objectives. “The term “high flow suspension” is very misleading. Did the Regional Board collect flow data over an extended period of time in the waterbodies proposed for temporary suspension of bacteria objectives? Without rain gauges on a specific waterbody, it is impossible to know if the flow is truly significantly elevated. ...Given the lack of understanding about flow, it is impossible to predict when individuals could be recreating in a waterbody. People who swim or surf in wet or winter weather are entitled to the same health protection and water quality standards as those that swim at beaches during the Fourth of July. ...Of note, high bacteria concentrations from upstream waterbodies could contribute to exceedances of water quality standards in downstream waterbodies. Thus we urge the Regional Board to not include a temporary suspension of bacteria objectives.</p>	<p>The January 12, 2012 staff report for the proposed amendments, and supporting technical documentation in the administrative record for this matter, describe in detail the technical bases for the recommended high flow suspension, the criteria to be used to trigger the suspension, and the criteria for termination of the suspension. Flow conditions in a number of streams considered representative of the types of channels to which the suspension criteria would apply were carefully evaluated. The flow response in these streams to storm events of different sizes, and the time required to return to base flow conditions, were evaluated. Further, the criteria employed by flood control agencies to determine when access to channels by the public should be prohibited in the interest of safety and the criteria employed by agencies engaged in stream monitoring (e.g., the United States Geological Survey) to determine when samplers are placed at undue risk were also evaluated and used to define the recommended suspension criteria. The suspension criteria proposed in the amendments identify those conditions in which flow conditions in the streams effectively preclude recreational uses because of safety considerations. To the extent that an individual chooses to recreate in such waters during unsafe conditions, the characteristics of the flow rather than bacteria quality are the principal public health and safety concern. In theory, the suspension should be applied to any surface stream</p>

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<p>The definition of “modified channels” can lead to use suspension in any water body where any vegetation has been removed or had any small modifications. This is completely inappropriate.</p>	<p>when the suspension criteria are met. However, Board staff recommends that the suspension be limited to engineered or heavily modified channels.</p> <p>It is recognized that bacteria concentrations from upstream waterbodies could contribute to exceedances of water quality standards downstream. Water quality standards in waters downstream of those for which the suspension is in temporary effect must be met, unless the suspension also applies to the downstream waters. In fact, the application of the temporary suspension to certain waters could facilitate the protection of downstream waters where recreation use may continue to occur (e.g., ocean beaches) by making it feasible to focus control efforts on those downstream waters, rather than in the upstream waters themselves. This approach would enhance rather than preclude public health and beneficial use protection.</p> <p>Please see the response to EPA Region 9 comment # 9.</p>
<p>#7. Re-designate specific waters to remove REC1 or REC1 and REC2 uses. “...the proposal sets an incentive to channelize inland waters in order to dedesignate beneficial uses and have less stringent requirements. The additional regulatory incentive of dedesignation will only lead to more efforts to channelize creeks and streams...rather than more ecologically friendly flood control efforts...More natural, bioengineered approaches to flood control will likely result when beneficial use designations are maintained.”</p> <p>“In addition, waterbodies dedesignated from a REC1 to a REC2 or complete dedesignation from water quality standards could stall restoration efforts.</p>	<p>The Regional Board exercises authority pursuant to the federal Clean Water Act (section 401 (water quality standards certifications)) and the California Water Code (e.g., consideration of the issuance of waste discharges requirements and enforcement of adopted waste discharge requirements) to regulate proposed discharges, such as those associated with stream modification projects, to assure that water quality and beneficial uses will be protected. The exercise of that authority does not negate the Regional Board’s responsibilities and authorities for determining the water quality standards that properly apply to waters of the state and the United States. The Regional Board’s determinations in surface water quality standards matters are subject to review and approval by the State Water Board and EPA Region 9.</p>

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<p>“The Regional Board states that dedesignated waters would be reviewed at least once every three years during the Triennial Review process. Given resource constraints, it is impossible that this review would be given the enormous amount of time needed to review all of the data and science.”</p>	<p>The recommendations in the proposed amendments for de-designation of REC1 or REC1 and REC2 uses for certain waters were based on detailed analyses described at length in the January 12, 2012 staff report (see the UAA sections of this staff report) and supporting documents in the administrative record. These analyses fully comply with relevant federal regulations for the consideration of de-designations.</p> <p>We understand that Heal the Bay is cognizant of, and disagrees at least in part with, the de-designations of some recreational uses for portions of Ballona Creek, which is in the Los Angeles Region. These de-designations were based on a Use Attainability Analysis performed by staff of the Los Angeles Regional Board. Of particular relevance in response to this Heal the Bay comment is the fact that the State Board took up the matter of the re-designations for Ballona Creek on its own motion. The Los Angeles Regional Board had declined to approve the recommendations of its staff for the de-designations, on the grounds that it would be appropriate to await consideration of future restoration efforts that might affect the attainability of recreational uses in the Creek. However, the State Board found instead that it would be appropriate to proceed with the re-designations, recognizing that changes could be made in the future if justified by restoration efforts. Federal regulations require the re-consideration of water quality standards that do not include “swimmable” (i.e., REC1) uses (and “fishable” uses) at least once every three years to determine whether conditions have changed such that the REC1 designation has become appropriate. This requirement applies to Ballona Creek, and to the waters in Region 8 that are proposed for de-designation. We appreciate the fact that Heal the Bay recognizes the resource constraints that confront the Board. These constraints confront virtually every agency and organization, and they make all the more essential sound decisions regarding applicable water quality standards. With appropriate standards established, resources can then be used in the most appropriate and effective manner to improve and</p>
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	<p>protect water quality, beneficial uses and public health</p> <p>It should be noted that the level of UAA documentation collected and reviewed by the Santa Ana Regional Board in recommending the de-designations in the proposed amendments is equal to or exceeds that which the State Board relied on to reclassify Ballona Creek. It may be noted that EPA Region 9 approved the re-designations for Ballona Creek without reservation.</p>
<p>#9. (note, there is no #8 in the Heal the Bay letter): Delete the bacterial quality objective for MUN. The Regional Board should not remove the MUN use without adequate documentation that MUN is not an “existing” use.</p>	<p>See response to 2-23-12 comments by EPA Region 9, #5</p>
<p>Conclusion: “ The Regional Board’s proposal has major implications on public health protection...many elements of the proposal will put recreators at greater risk and will not protect beneficial uses. At the same time, the proposal will likely stall restoration and water quality improvement efforts... The proposed Basin Plan amendment is the wrong action at the wrong time...Heal the Bay opposes the proposal as discussed above.</p>	<p>In contrast to the position expressed by Heal the Bay, and for the reasons described in part above, Regional Board staff believes that the proposed amendments, if approved and implemented, will result in public health and beneficial use protection. In fact, that the level of protection provided would exceed that now provided by the Basin Plan since (1) revised bacteria quality objectives based on an indicator organism now recommended by USEPA to protect public health would be established and (2) the suite of amendments, including changes to REC1 designations for certain waters and implementation strategies such as the temporary suspension of recreational standards, would enable and encourage responsible parties to implement control actions in prioritized and most appropriate fashion, thereby allowing limited resources to be applied first where the risks to public health and beneficial uses are most acute.</p>

Responses to Heal the Bay's Supplemental Comments (4-20-12) Concerning the Use Attainability Analyses

Comment	Response
Santa Ana-Delhi Channel	
<p>Reach Identification</p> <p>1. The reaches should have been:</p> <ul style="list-style-type: none"> ○ Tidal Prism: Bike path to Mesa Dr. (earthen bottom/one side rip rap) ○ Mesa Dr to Alton Ave. (box channel) ○ Alton Ave. to Warner Ave. (earthen bottom/rip rap) <p>By segmenting these reaches according to similar characteristics, such as earthen bottoms, rip-rap walls, and more natural landforms, the public has a better sense of the possibilities for each reach, in terms of water quality, habitat, and recreational uses. The UAA's segmentation of the Creek combines reaches with different characteristics, like earthen bottoms segments with box channel segments. This type of segmentation can promote certain features or attributes as being homogeneous throughout the stretch of Creek, when they are not.</p>	<p>Reach boundaries do not necessarily represent stream reaches with homogenous attributes. The proposed boundaries reflect differences in the nature of flow (marine, freshwater), channel morphology and other characteristics that affect recreational potential and, thus, recommendations for appropriate use designations.</p> <p>The tidal prism reach of the Santa Ana-Delhi Channel (SAD) was identified in the UAA as the section from the Bike Bridge at Upper Newport Bay upstream 1038 ft. ,to the bend in channel. This section is in view of the public from the bridge and dominated by marine waters. From the bend in the channel up to Mesa Dr. (and further upstream) the channel is generally out of public view with no evidence of REC activities. As result, this section, although an earthen channel, is proposed to be designated as part of Reach 1. Reach 1 is designated as from the Tidal prism up to the intersection of Sunflower Ave and Flower St in Santa Ana. Except for the short section of earthen channel above the Tidal prism to Mesa Dr. and where the channel runs underground from the 405 Freeway to Sunflower Ave, the channel is a concrete open box. The Heal the Bay comments have miss-identified the proposed SAD Reach 1 and Reach 2. The Santa Ana Gardens Channel, a tributary of the SAD channel and not part of the UAA, flows past Alton Ave. The proposed SAD Reach 2 starts at the intersection of Sunflower Ave and Flower St and ends at Warner Ave. Reach 2 is mostly an earthen bottom channel with rip rap sides.</p>
<p>2. It is first argued that there is not enough flow: the dominant dry weather flows create perennial flow of a few inches (6 inches or less)...and sources are groundwater and urban runoff . Then it is argued that the region cannot attain water quality criteria during dry weather because the BMPs implemented are not sufficient. Perhaps the BMPs implemented should not be treatment types, but capture and reuse or infiltration given the low flow volumes.</p>	<p>The OC Stormwater NPDES permit requires an iterative process of BMP implementation designed to achieve water quality standards in receiving waters. Since the watershed is completely built, implementation of capture/reuse or infiltration BMPs is highly problematic.</p>
<p>3. There is no documentation on whether a source control/source identification program, and the subsequent source abatement program having been implemented. There is no discussion on whether a watershed approach to BMP implementation was ever adopted. No documentation on actual BMP implementation, and or</p>	<p>Considerable documentation regarding source identification and control has been developed and submitted to the Regional Board by the MS4 co-permittees in all three counties. The Regional Board receives regular reports , at publicly noticed public meetings ,describing the scope and effectiveness of these efforts. All of the information regarding BMP</p>

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<p>performance criteria associated with those implemented BMPs. All the information associated with BMPs in this section are citations to studies on efficacy. There is no actual information highlighting any implemented BMPs, aside from diversions, in the watersheds. How can the public reasonable expect that the effort was made to control Bacteria inputs by any agency or municipality to control urban runoff or nuisance flows without such information?</p>	<p>planning, implementation and effectiveness is available for public review and inspection at the Regional Board's office in Riverside.</p>
<p>4. Dry weather diversions are stated as 100% effective. The rationale cited on the phone—per our conversation (04/19) was a concern for habitat. Yet, the UAA states that “treatment agencies do not like them”, and view them as a temporary practice. Which of the two responses is it? If the later, this is not a sufficient reason why bacterial objectives can't be obtained. Dry-weather, and even some wet-weather, low-flow diversions are an integral part in RWQCB 4 Bacterial TMDL compliance. In addition, the UAA argues that full capture is economically infeasible. This is understandable if the argument is for wet weather conditions. However, this is should not be the case for dry weather time-periods and low flow events.</p>	<p>Although dry weather diversions are 100% effective, this strategy may pose a risk to aquatic habitat by dehydrating local streams. And, at the same time, dry weather diversions may not be a reliable option because the wastewater treatment agencies caution that they are unable to assure that there is sufficient capacity in the collection or treatment system to handle the increased flow from storm channel diversions. (The UAA report reflects this, not that “treatment agencies do not like them”.) Nevertheless, diversions are likely to be a key component for achieving compliance with bacterial objectives during dry weather, low-flow conditions, as reflected in the Comprehensive Bacteria Reduction Plans recently approved (February 2012) by the Regional Board for San Bernardino and Orange counties. As described in the UAA staff reports, a number of these diversions are already being operated in Orange County.</p>
<p>5. Why did the RWQCB 8 use a calendar time-period to conduct its geometric mean analysis for bacteria for this UAA, when the Basin plan uses a 30-day rolling average?</p>	<p>The Basin Plan does not specify existing bacteria quality objectives as a rolling average. The available data were compared to the Basin Plan objectives, which specify a minimum of five samples over a 30-day period. The results of those analyses showed that the objectives are not consistently met, as reported in the UAA report.</p>
<p>6. The UAA fails to demonstrate how efforts to attain recreational water quality standards in the downstream receiving water body—currently REC 1—will not be negatively impacted by the request to remove the upstream recreational use designations—an action that will allow higher levels of indicator bacteria in the upstream tidal prism, REACH 1 and REACH 2. The REC-1 use of the downstream receiving water-body is not in question. If bacterial standards during dry weather in this section of the receiving water-body can't be met, then how does it figure this runoff or flow will not have a negative impact on the downstream receiving water-body?</p>	<p>The need to protect downstream uses is an axiom recognized and employed by Regional Board staff and members of the Stormwater Quality Standards Task Force since the outset of the effort to consider revisions to recreation standards in the Region. (The administrative record for this matter includes a list of other applicable axioms, based on existing law, regulation and policy.) Nothing in the proposed Basin Plan amendment "allows higher levels of indicator bacteria in the upstream" waters. State and federal antidegradation policies continue to prevent lower water quality even if upstream segments are redesignated. Moreover, the proposed Basin Plan amendment makes clear in several places that water quality must continue to be applicable downstream objectives even if upstream segments are reclassified. Consequently, the Regional Board has no reason to believe downstream uses will be negatively impacted by</p>

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	<p>the proposed Basin Plan revisions. On the contrary, by promoting the implementation of regional treatment solutions, the Regional Board expects downstream water quality to improve over time.</p>
<p>7. Did RWQCB 8 solicit information from ‘historic societies’, local historians, or personal interviews to complete if determination of historic uses? Historic uses exploration should have included a people survey of local historians or senior citizens of the area. Personal Interviews should have been a component of this process. Simply looking on Google or electronic archives can be insufficient and incomplete due to the nature of digital archives.</p>	<p>The Stormwater Quality Standards Task Force (SWQSTF) commissioned CDM to investigate all readily available sources of information regarding past, present and probable future recreational uses in each waterbody as a key part of the UAA. Contrary to the allegations made by this commenter the investigation was not limited to simple Google searches. CDM conducted numerous interviews with local experts and resource managers. County flood control staff who regularly visit the channels, many of them with long years of experience, were also interviewed. The results of these interviews are documented in the UAA Technical Reports and the minutes of the SWQSTF meetings.</p>
<p>8. In addition, there were photos that showed ‘tagging’ or graffiti in portions adjacent to the Creek, which suggests that there is access. Such actions would indicate that people are able to access the areas. In RWQCB 4, ‘tagging’ or graffiti, while illegal, can demonstrate that access and use exist in the area.</p>	<p>Tagging and graffiti were noted and considered as part of each UAA. Board staff acknowledges that graffiti does provide evidence of access and was treated as such. However, the voluminous photographic documentation developed by the SWQSTF demonstrates that "tagging" is not a reliable indicator of water contact recreation (REC1 or REC2). CDM prepared a report “Summary of Camera Survey Locations Report on the Delhi” that shows all pictures that include people in the channel. No one observed was recreating in the water. The sections of the channel where graffiti was observed are in the proposed Reach 2; the REC2 designation is recommended for that reach.</p>
<p>9. The OCFCD denies access due to safety concerns. As it relates to this issue of de-designation or this UAA, the argument may be applicable for wet-weather (high velocity flow) conditions, yet is completely inappropriate for dry-weather. There is little justification as to why the public should not be able to use or have access to the Creek during the 98% of time when such high-flow conditions do not exist.</p>	<p>Regional Board staff disagrees with the commenters suggestion that the flood control channels only present a safety hazard during high flow conditions. In particular, the high vertical walls can be especially dangerous at all times. That's why access is restricted by fences and locked gates. Whether the public "should be able to use or have access" to these channels is not a decision the Regional Board is authorized to make.</p>

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<p>10. While there are vertical walls in segments, there is a sufficient amount of area that is covered with rip-rap. RWQCB 8 seems to make the subjective argument that even in dry-weather the Creek is unsafe in these areas to access.</p>	<p>Board staff can attest to the fact that walking down a rip-rap slope, particularly a steep one, can be hazardous. Nevertheless, where the public has relatively easy access to the stream channels, and particularly where rip-rap is used in lieu of concrete, the proposed Basin Plan amendments acknowledge this distinction by recommending the reach be classified REC2 rather than removing all recreational use designations. The photographic evidence clearly demonstrates that there is no reasonable possibility of immersion or ingestion even in those locations where the public is entering such channels during dry weather conditions. Contact with the water, if it occurs at all, is limited to incidental contact (e.g., walking in the channel; it appeared that some people use the channel as a travel route from one point to another).</p>
<p>11. This UAA fails to even discuss the statewide, and Southern California, initiatives to obtain great access to these once off-limit areas. For example, the City of Los Angeles has the lead the way in making the LA River a destination place for contact water recreation and public education. There are several other examples in Los Angeles County where semi-channelized waterbodies are being utilized for their non-direct recreation benefits, habitat opportunities, and public education. A number of State Conservancies and Private Non-profits are currently looking at acquiring parcels to develop greater open space opportunities for park poor regions by working with local groups. Neither the State Agencies, Non-Profit groups, nor local community groups appear to have been solicited for this review. On the State level, SB1201 (De Leon) seeks to address this issue of public access to flood control channels, engineered creeks, streams, and rivers. The bill, if adopted, will amend Section 2 of the Los Angeles County Flood Control Act (Chapter 755 of the Statutes of 1915) “to include or provide for public use of navigable waterways that are suitable for recreational and education purposes” as they relate to the Los Angeles River. This bill is likely to set precedent for other receiving waterbodies in the State.</p>	<p>The Regional Board staff carefully considered the on-going efforts to obtain greater public access to flood control channels. CDM contacted county and city planning agencies to determine whether there are restoration plans, firm or otherwise. There are no plans for restoration of the Delhi channel to allow or encourage recreational activity.</p> <p>In accordance with the State Board's determination in WQO 2005-0004, the mere existence of such restoration plans is not sufficient to demonstrate that a recreational use is likely to occur. There must also be a real-world commitment to actually build the parks and other amenities that facilitate water contact recreation activities. If and when such improvements are made, the Regional Board is obligated to reconsider the appropriate beneficial use designation as part of the regular triennial review process. In the meantime, the proposed Basin Plan amendments are intended to better protect water quality in all lakes and streams where water contact recreation is already occurring.</p>
<p>12. The UAA appears to argue that hydro-modifications impacts are indefinite. In addition, the UAA seemed only to consider full restoration of the Creek as the only alternative. There is no discussion of partial enhancement to the Creek as a viable option. Also, this section took no account of statewide and southern California wide</p>	<p>As described above, the Regional Board staff did take into consideration the possibility that some creeks may be fully or partially restored. However, rather than speculate as to when and where such improvements may occur, and consistent with the State Board's instructions, the Regional Board will continue to rely on the existing triennial review process to make</p>

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measures that consider these areas as important sites for implementing integrated water management opportunities, LID, and other multiple-benefit land-use policies to treat water.	appropriate adjustments to designated beneficial uses.
13. Finally, the summary of adjacent land-uses and their potential to impact water quality or the role they could play in addressing water quality issues—as the relate to the previous bullet point—are not sufficiently address. How is the public able to determine possible sources impact the Creek or evaluate opportunities for watershed-wide multiple benefit BMPs. For example, there are two large golf courses, a regional park, and a school all in located is close proximity to the Creek.	Regional Board staff agrees that adjacent land uses have the potential to impact water quality. Land use characteristics are carefully evaluated as part of on-going source identification and source control programs. Where golf courses, parks and schools are located in close proximity to creeks, these factors were carefully considered as part of the UAA process and used to inform the Regional Board's determination as to whether immersion and ingestion was reasonably possible at any given location.
Greenville-Banning Channel	
14, 15: See comments # 2 and 4	[note: many of the comments provided re the Santa Ana Delhi Channel were repeated for the other UAA waters. In these cases, the comments and responses are referenced by number] See responses 2 and 4. It is noted that a dry weather diversion is operated in the Greenville-Banning channel.
16. An 'Orange County Areawide Urban Stormwater Runoff Management Plan' is mentioned, and a suggestion that the drainage area limits the effectiveness of many BMPs. What documents or data support this assertion? Most management plans are an iterative process, based on implemented programmatic and structural BMPs. Has this type of evaluative component been completed on actual implemented structural BMP performance and design? Beyond low-flow diversions, what other actual BMPs were installed in this watershed? What changes or modifications to those implemented BMPs were completed to address short-coming to initial BMP construction? As for programmatic BMPs, what evaluative measures were used to determine behavioral changes in municipalities (the general population), given that urban runoff is the primary bacterial source?	The build-out of much of the tributary area places practical limitations on the implementation of BMPs . The MS4 co-permittees in all three counties have conducted studies and submitted numerous reports to the Regional Board regarding the implementation and effectiveness of BMPs for controlling bacteria pollution. These and other related documents are available for public review and inspection at the Regional Board's main office in downtown Riverside. Where monitoring indicates the BMPs may not be adequate to meet the bacteria objectives, the MS4 co-permittees must submit a plan to remedy such deficiencies and implement the plan upon approval by the Regional Board.
17. Has enforcement been implemented in this watershed as a deterrent to urban runoff or nuisance flows in association with MS4 or NPDES compliance?	The Regional Board has conducted numerous audits of the MS4 program in all three counties and has initiated enforcement actions in a number of cases. These actions are a matter of public record.
18. There is no documentation on whether a source control/source identification program, and the subsequent source abatement program having been implemented. There is no discussion on whether a watershed approach to BMP implementation was ever	The comment is factually incorrect. The area-wide stormwater programs have submitted a considerable number of reports documenting on-going source identification, source control and BMP implementation efforts in all three counties. The Regional Board reviews these reports and routinely

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<p>adopted. No documentation on actual BMP implementation, and or performance criteria associated with those implemented BMPs. All the information associated with BMPs in this section are citations to studies on efficacy. There is no actual information highlighting any implemented BMPs, aside from diversions, in the watersheds. How can the public reasonable expect that the effort was made by any agency or municipality to control bacteria inputs from urban runoff without such information?</p>	<p>hears related presentations at informational workshops during regularly scheduled public meetings. All of these records are available for public review and inspection at the Regional Board's office in Riverside.</p>
<p>19. See comment #5</p>	<p>See response #5</p>
<p>20. See comment #6</p>	<p>See response #6</p>
<p>21. See comment #7</p>	<p>See response #7</p>
<p>22. See comment #11</p>	<p>See response #11</p>
<p>23. See comment #12</p>	<p>See response #11</p>
<p>24. Finally, the summary of adjacent land-uses and their potential to impact water quality (Mesa Verde and Costa Mesa golf courses) or the role they play in addressing water quality issues (Fairview Regional Park and Talbert Regional Par) – as the relate to the previous bullet point – are not sufficiently addressed. How is the public able to determine possible sources impact the Creek or evaluate opportunities for watershed-wide multiple benefit BMPs.</p>	<p>See response #13</p>
Temescal Creek	
<p>Reach Identification 25. Reach Identification: The UAA Reach 1a should not have included: Cota St. Lincoln Ave (earthen bottom/rip-rap); everything else is in this reach is a box or trapezoidal channel. ...This combining of different segments can promote or hide certain desirable features or attributes as not existing or being homogeneous throughout the stretch of Creek. (see also comment #1)</p>	<p>Although this short segment of Reach 1a is earthen while the remainder Reach 1a is concrete trapezoidal, both segments have similar beneficial uses. Both are fenced and posted to keep people out, there is no evidence of water contact recreation, and both have the same flow and no or little riparian vegetation. It is obviously that people walk in both of these sections of Reach 1a. In addition, staff didn't want to over segment sections of any water. The earthen segment is very similar to the rest of Reach 1a and very dissimilar to the reach downstream of Lincoln Ave, Prado Basin Management Zone (listed as a wetlands in the Basin Plan). See also response #1</p>
<p>26. A 'Comprehensive Bacteria Reduction Plan' has been developed and is the foundation for achieving compliance of water quality standards as part of the MS4 permit, and to support compliance with the Middle Santa Ana River TMDL. While Bacteria treatment or structural BMPs are stated, and citations to Stormwater Design Handbook mentioned, there is no actual projects referenced or discussed. "Planning is</p>	<p>The CBRP provides a detailed description of how BMP projects will be evaluated and selected. However, as explained in both the CBRP and in the administrative record for the proposed Basin Plan amendments, the range of available solution strategies depends on whether the proposed Basin Plan amendments (particularly the channel reclassifications and high flow suspensions) are approved. The Basin Plan amendments are</p>

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<p>underway to develop future management controls” but this is not explained in detail as to what actual projects will be forthcoming, and whether those identified projects will actually work.</p>	<p>intended to facilitate implementation of regional treatment alternatives that might otherwise be unavailable without the proposed revisions.</p>
<p>27. In the meantime, as the UAA asserts “the ‘Comprehensive Bacteria Reduction Plan’ is an iterative and adaptive process” that was started in 2006 and nearing completion in 2010—“Final Draft CBRPs were submitted in late December 2010...to RWQCB staff for review.” What BMPs, treatment, structural or programmatic, have been implemented during this time-period? Has any evaluative component been completed on actual implemented structural BMP performance and design? Beyond low-flow diversions, what other actual BMPs were installed in this watershed? What changes or modifications to those implemented BMPs were completed to address short-coming to initial BMP construction? As for programmatic BMPs, what evaluative measures were used to determine behavioral changes in municipalities or the general population, given that urban runoff is a bacterial source?</p>	<p>28. As noted above, successful implementation of the CBRP is contingent upon whether the Regional Board approves the proposed Basin Plan amendments. The commenter will find detailed descriptions of previous and proposed BMPs in the CBRP itself, in the annual reports submitted by the MS4 co-permittees, in the Urban Source Evaluation reports prepared by the MSAR-TMDL Task Force. All of these and other related documents are available for public review and inspection at the Regional Board's office in Riverside.</p>
<p>29. In addition, the Middle Santa Ana River TMDL and MS4 are stated as the drivers for Bacteria compliance in Temescal Creek. Compliance is set for December 2015, at the latest. Why move forward with a UAA now instead of waiting 3 years until the TMDL has run its course? Also, it seems premature to proceed with a UAA for Temescal and Mill-Cucamonga Creek when the ‘Comprehensive Bacteria Reduction Plan’ was barely finalized—“Final Draft CBRPs were submitted in late December 2010...to RWQCB staff for review.” It seems that the plan hasn’t had enough time to be in effect to make a UAA determination for non-compliance with water quality objectives for Bacteria. Implementing a UAA will most certainly impact monitoring (removing or reducing), BMP implementation, and water quality compliance schedules (eliminating the use, eliminates the compliance).</p> <p>30. How can the public reasonable expect that the effort was made by any agency or municipality to control bacteria inputs from urban runoff without such information?</p>	<p>The strategy for achieving compliance in Temescal Creek presumes that the stream is re-designated to reflect the actual and probable future beneficial uses likely to occur in the stream. The relationship between the CBRP and the proposed Basin Plan amendments is described, in detail, in the administrative record for both actions. It appears that the commenter is unfamiliar with the specifics of these documents. The UAA determination is based on whether the uses are likely to occur or whether water quality is already meeting the proposed <i>E. coli</i> objective. If the BMPs are successful at achieving the proposed objectives in waterbodies that are not designated REC1, the Regional Board will be obligated to reconsider whether such uses must be upgraded to reflect improved water quality during the regular triennial review process.</p> <p>We agree that the UAA results are likely to impact monitoring and BMP implementation, allowing and encouraging responsible parties to focus resources on BMPs, including regional treatment facilities, where they are most necessary to protect recreational uses. The result will be enhanced water quality and beneficial use protection.</p>
<p>31. Sources are nuisance flows from urban runoff, wastewater, and Water District. If the waste water plant is coming off line, does this impact the District’s recycled water program? What is the capacity of the</p>	<p>This comment is unclear. The City of Corona and Lee Lake Water District operate separate wastewater treatment facilities. Both the District and the City may reduce or cease their discharges to Temescal Creek, further</p>

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wastewater or district agencies to capture first flush or storm events?	reducing the amount of water in the Creek. Information concerning the ability to capture first flush/storm events can be sought directly from these agencies. The context of such information in this matter is not clear.
32. This comment is essentially with same as #6, with reference to Reach 1a and 1b	See response to #6
33. The 'Probable Future Uses' section appears limited to local municipalities. Did RWQCB 8 check with State or other open space/Park groups desires regarding future uses for the area?	The "probable future uses" section is not limited to local municipalities. Appropriate inquiries were also made of state and county park officials regarding future recreational plans for areas adjacent to the creeks.
34. Again, the characterization of adjacent land-uses and available areas is limited in its scope as it relates to bacterial inputs or opportunities for regional or site specific BMP implementation. For example, there is a large sized lot at Magnolia and 6th (27 acres)—willing seller based on Google photos—in proximity to Temescal Creek that could be identified as a multiple benefit project.	This comment has been forwarded to Riverside County Flood Control District, as the principal permittee for the area-wide stormwater permit, for further consideration as part of the CBRP implementation effort.
35. See comment #7	See response #7
36. This comment is essentially the same as #9, with reference to RCFC	See response #9
37. Again, characterization of adjacent land-uses and available areas is limited in its scope (p.11) as it relates to bacterial inputs or opportunities for regional or site specific BMP implementation. For examples, there is a large sized lot at Magnolia and 6 th (27 acres) – willing seller based on Google photos – in proximity to Temescal Crrek that could be identified as multiple benefit project.	See response #13. Site selection is an important part of BMP implementation, taking into account the ability to employ regional BMPs vs site-specific BMPs, land availability, downstream use protection, etc.
38. See comment #11	See response #11
Cucamonga Creek	
39. Water Quality; Documented sources are nuisance flows urban runoff (2.8mgd), agricultural (feed-lots and farming), and wastewater (2.8mgd). Did the San Bernardino Stormwater Program include the wastewater effluent as part of the nuisance flows or is this a separate 2.8 mgd value? Is there a runoff value for Ontario Airport?	Wastewater effluent is not considered a "nuisance flow." The UAA report does not include a specific runoff value for Ontario Airport. However, other studies and reports have been submitted to the Regional Board regarding water quality in and around the airport. These reports are available for public review and inspection at the Regional Board's office in Riverside.
40. Has the San Bernardino Stormwater Program, the local POTW or RWQCB 8 considered an Integrated Water Resources Management Plan in an effort to limit the amount of nuisance flows to Cucamonga Creek? There is no discussion of this type of planning in the UAA.	The San Bernardino Stormwater Program, in conjunction with several water and wastewater agencies throughout the county, is actively engaged in implementing an Integrated Water Resources Management Plan to limit nuisance flows in Cucamonga Creek by capturing and infiltrating such flows. This effort is thoroughly described in the CBRP, the Watershed Action Plan, and numerous other documents submitted to the

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	Regional Board. All of these documents are available for public review and inspection at the Regional Board's office in Riverside.
41. While there is a recycled water program, there is no discussion as to volumes being recycled or goals/capacity of future recycling efforts? This is critical information if flows from treated wastewater create conditions that exacerbated bacterial growth? Given that the POTW is treating its sewage water to tertiary level, is groundwater infiltration a possibility versus discharging it into a box channel?	A detailed discussion of wastewater recycling efforts in the Santa Ana region can be found in the voluminous record associated with Resolution No. R8-2004-0001 wherein the Regional Board enacted a comprehensive salt and nitrate management plan for the entire watershed, including provisions pertaining to the use of recycled water. There is no evidence in the record to indicate that tertiary treated effluent is exacerbating bacterial growth. Nor is such effluent discharged to box channels in the Santa Ana Region. Most municipal effluent is released to streams that are and will continue to be designated REC1. There is no need to divert such discharges out of the streams because the effluent quality meets all Title-22 requirements and is better than the proposed bacterial objectives.
42. See comment # 26	See response #26
43. See comment #27	See response #27
44. This is essentially the same as comment 29, with reference to Cucamonga Creek	See response #29
45. See comment #30	See response #30
46. See comment #7	See response #7
47. See comment #9 (with reference here to RCFCD and SBCFCD)	See response #9
48. See comment #33	See response #33

Responses to USEPA Region 9 Comments – April 25, 2012

Comment	Response
<p>1. EPA appreciates the discussion at the meeting in San Francisco on April 10, 2012 between EPA, Santa Ana Regional Water Quality Control Board, and members of the Storm Water Quality Task Force to clarify the proposed amendment and supporting documents. The errata document addresses many of our earlier concerns...We have not as yet completed reviewing the UAAs, but appreciate that the scope is limited to redesignation of REC1 to REC2 in 4 waterbodies.</p>	<p>Comments noted. No further response required.</p>
<p>2. We have no objection to the modifications to add “Primary Contact Recreation” to the REC1 name and “Secondary Contact Recreation” to the REC2 name.</p>	<p>Comment noted. No further response required.</p>
<p>3. EPA recommends that the 13 paragraphs in bold, on pages 3-5, be deleted in full. The language is unnecessary Basin Plan language. It may be more appropriate in a staff report.</p>	<p>EPA makes reference to paragraphs proposed in the Errata sheet, p. 3-5, for addition to the Basin Plan. This language is proposed in lieu of changes to the REC1 definition itself. EPA had earlier expressed concern about the proposed changes in the definition, specifically, that the changes to the definition itself would result in statewide inconsistency.</p> <p>The narrative language proposed to be added to the Basin Plan is intended to provide the clarification initially sought in the proposed refinements to the REC1 definition itself. This clarification is necessary to assure that recreation standards are applied and implemented in a manner consistent with federal guidance and with the conditions and assumptions underlying the epidemiology studies that USEPA relied on to derive the recommended national bacteria criteria. Thus, the proposed language is significant and an appropriate part of the Basin Plan itself.</p>
<p>4. EPA recommends that the entire paragraph in section 7 of the errata document, on p.6, be deleted, as it is unnecessary to include future “intent” to consider a Basin</p>	<p>EPA refers to the paragraph in the Errata sheet that is proposed to be included in the Basin Plan to take note of the USEPA promulgation of enterococci criteria for coastal recreation waters,</p>

<p>Plan amendment for enterococcus. The enterococcus criterion is already promulgated under the BEACH Act.</p>	<p>including enclosed bays and estuaries, in 2004. The proposed language takes note of the facts that (1) in promulgating these criteria, USEPA did not specify an averaging period for the expression of the criteria and (2) that while USEPA identified single sample maximum values for enterococcus that vary based on the intensity of REC1 use, USEPA did not define the specific areas to which the varying numbers would apply. The proposed language simply clarifies these pertinent facts and indicates that a future Basin Plan amendment will be appropriate to address these current issues. Once such an amendment is approved, then this explanatory paragraph, if approved as part of the proposed amendments, would be removed.</p> <p>We are surprised by this comment since, during our April 10, 2012 meeting, EPA staff commented that the inclusion of most of this explanatory language would be useful.</p>
<p>5. We appreciate that staff has changed the proposed REC2 antidegradation standard from being based on the 95th percentile to the 75th percentile, which is more protective than the previous proposal. We believe that the implementation of the proposed REC2 standard depends on a proper monitoring program and that the adequacy of said monitoring programs should be reviewed by the State Board and EPA.</p>	<p>The proposed antidegradation targets for REC2-only waters are intended to provide evidence concerning water quality degradation over time. Per the proposed Basin Plan language, where credible evidence indicates that there may be water quality degradation, then follow-up actions, including increased monitoring and source investigations/corrective actions (where shown to be necessary) would be implemented. See the proposed amendments to Chapter 5, Implementation, <i>Antidegradation targets for REC2 only freshwaters</i>, and <i>Monitoring Plan for Pathogen Indicator Bacteria in Freshwaters</i>.</p> <p>We appreciate EPA's acknowledgement that the number of waters that would be designated REC2 only (through UAAs) and to which the antidegradation targets only, not the recommended <i>E. coli</i> objectives, would apply, is very limited. Even without the proposed re-designations, monitoring in these waters is likely to be very limited given what is known about the nature of their use for water contact recreation; in light of resource constraints, monitoring efforts are more properly directed to and focused on areas where recreational use is more likely to occur and where,</p>

	<p>therefore, the threat to public health is most significant. We believe that it would be an inappropriate use of both State Water Board and EPA staff resources to focus time and effort on the review of monitoring programs designed to address REC2 only waters. That said, Regional Board staff would consider any comments that either State Water Board or EPA staff choose to provide on such monitoring efforts.</p>
<p>6. We would like to point out that though the tiering of uses (in Table 5) is placed in the implementation chapter of the Basin Plan, EPA considers such tiering as a standards change, and thus actionable under the Clean Water Act.</p>	<p>EPA refers to Table 5-REC1-Tiers, which is proposed to be added to Chapter 5 Implementation, of the Basin Plan. For the purposes of assigning appropriate single sample maximum <i>E. coli</i> values, the table assigns each fresh surface water in the Region to a tier based on the known or anticipated intensity of REC1 use.</p> <p>EPA's comment is noted; no further response is required.</p>

Responses to Heal the Bay's Oral Comments at 4-27-2012 Regional Board Meeting – Item 9¹

Comment	Response
1. We are concerned that there has been an inadequate effort put forth towards effectively trying to meet the actual water quality standards prior to implementing a UAA. Specifically, documentation on actual BMP implementation and subsequent performance criteria is lacking.	Considerable effort has been and continues to be made to achieve recreation water quality standards. These efforts are documented in reports submitted by responsible parties in the watershed. See responses to comments # 3, 18, 26 and 27 in the "Responses to Heal the Bay's Supplemental Comments (4-20-12) Concerning the Use Attainability Analyses".
2. Dry weather diversions are stated as 100 percent effective. Yet, as quoted in the UAA, that treatment agencies do not like them. Simply not liking a BMP is an unacceptable reason not to meet bacteria objectives.	None of the UAA reports states that treatment agencies "do not like" dry weather diversions. Rather, the UAA reports identify constraints on the use of dry weather diversions; these constraints are noted in the response to comment #4 in the "Responses to Heal the Bay's Supplemental Comments (4-20-12) Concerning the Use Attainability Analyses". It is recognized nevertheless that dry weather diversions are likely to be a key component of achieving recreation standards.
3. An additional factor that should have been considered is how will receiving water bodies downstream from the UAAs achieve recreational water quality standards.	Board staff responded to this comment orally at the April 27, 2012 meeting (see transcript, p. 58-59). It is well recognized that downstream recreational water quality standards must be achieved and protected. See also response to comment #6 in the "Responses to Heal the Bay's Supplemental Comments (4-20-12) Concerning the Use Attainability Analyses".
4. Why not wait to explore de-designation until December 2015, the compliance deadline for the middle Santa Ana River bacteria TMDL, to see if bacteria standards could actually be met by that deadline?	It is important to consider whether revisions to recreation water quality standards (including beneficial use designations) are appropriate and justified so that control measure expenditures and efforts are likewise appropriate and justified. Waters for which the REC1 use is de-designated, through a Use Attainability Analysis, must be reviewed at least once every three years to determine whether conditions (including water quality conditions)

¹ A verbatim transcript of the April 27, 2012 proceedings was prepared and includes Heal the Bay's oral comments, which are summarized in this response document. The oral comments focused on Use Attainability Analyses (UAAs). Heal the Bay had earlier expressed concerns regarding the Use Attainability Analyses in supplemental written comments dated April 20, 2012. Board staff prepared written responses to these supplemental comments; these responses were part of the documentation prepared, posted and distributed for the April 27, 2012 Regional Board meeting on the recreation standards amendments.

	<p>have changed such that the REC1 designation has become appropriate. If so, the Basin Plan would need to be modified accordingly.</p>
<p>5. According to Clean Water Act Section 131.10(g), the State must be able to demonstrate that attaining the water body's beneficial use is not feasible due to one of six factors before implementing a UAA. However, all efforts to uphold a water body's highest beneficial use must be exhausted. This includes the implementation and performance analysis of actual BMPs, explored integrated water management opportunities, and low impact development.</p>	<p>Some clarification of terminology may be appropriate here. A Use Attainability Analysis is conducted to determine whether a designated beneficial use (e.g., REC1) is not attainable due to one or more of the six factors identified in the federal water quality standards regulations at 40 CFR 131.10(g). The legal/regulatory basis for UAAs is described in detail in the January 12, 2012 staff report for the proposed recreation standards amendments (see Sec. 5.6.2.1).</p> <p>It is not clear whence the concept of "highest" beneficial use derives, nor is it clear whether Heal the Bay believes that recreational use constitutes the "highest" beneficial use. Federal regulations (40 CFR 131.11(a)) make clear that the most <i>sensitive</i> beneficial use must be protected when establishing and implementing water quality criteria. There is nothing in the UAAs or proposed amendments implementing them that violates this requirement.</p> <p>It may be noted that there is no explicit statement in the UAA regulations of the specific controls or actions that must be taken to achieve standards. As stated above (see response to comment #1), substantial efforts have been and are being made to achieve water quality standards.</p>
<p>6. Moreover, it is critical to seriously consider section 101(a) and (b) of the Clean Water Act, which states that the objective of this act is to restore and maintain the chemical, physical, and biological integrity of the nation's waters, as well as it is the primary responsibility and rights of states to prevent, reduce and eliminate pollution before removing a water's beneficial use.</p>	<p>These provisions of the Clean Water Act, including the "fishable/swimmable" goal expressed in 101(a)(2), are well understood. It is in the context of these (and other) provisions of the Clean Water Act that the federal water quality standards regulations were written, including regulations pertaining to Use Attainability Analyses. These regulations essentially create the rebuttable presumption that "fishable/swimmable" uses, including REC1, should be designated for surface waters. The UAA</p>

	<p>regulations were established to provide the framework whereby that rebuttable presumption may be reviewed and reversed. The UAAs conducted and reported as part of the development of the proposed recreation standards amendments conform to the applicable regulations. As the administrative record for this matter makes clear, very serious consideration has been given to the goals and requirements of the Clean Water Act and implementing regulations.</p>
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