Comment Summary and Responses
San Diego Water Board Indicator Bacteria, Project 1
TMDL Comment Deadline: November 30, 2010

List of Commenter's:

Comment Reference	Company	Representative
1	City of Escondido	Cheryl Filar
2	City of La Mesa	Joe Kuhn
3	City of Oceanside – Water Utilities Department	Mo Lahsaie
4	City of San Diego Storm Water Department	Kris McFadden
5	City of Santee	Pedro Orso Delgado
6	City of Vista	Paul Hartman
7	County of San Diego – Department of Public Works	Cid Tesoro
8	General Public	Terry Thielen
9	Orange County – Department of Public Works	Chris Crompton
10	Rancho Mission Viejo	Laura Coley Eisenberg
11	San Diego Coastkeeper	Jennifer Kovecses

Response to Comments:

No.	Author	Comment	Response
0.1	Multiple	Some of the comments submitted in opposition to the State Board's approval of this BPA were previously submitted to the Regional Water Board and also submitted to the State Board, without further explanation.	Some of the individual comments submitted to the State Water Resources Control Board (State Water Board) on this matter are similar to a comment submitted to the San Diego Water Quality Control Board (San Diego Water Board) at the time the draft version of this TMDL was under consideration. As part of its consideration process, the San Diego Water Board provided written responses to all of the comments it received. The San Diego Water Board's responses either indicated that changes would be made or that changes would not be made, and the

			response included the reason. Where a commenter merely repeats a comment that was originally tendered to the San Diego Water Board on a prior version of the Basin Plan amendment (BPA), but fails to disclose what quarrel, if any, the commenter has with the response provided or the action taken by the San Diego Water Board in response to the comment, the State Water Board is unable to address the comment. Specifically, in those cases where the San Diego Water Board made changes in response to a comment, the commenter has failed to explain how the changes were allegedly inadequate. Likewise, where the San Diego Water Board did not make changes, the commenter has failed to explain how the response or explanation that the San Diego Water Board provided was allegedly inadequate, or even whether the commenter believes that the response was inadequate. Where a commenter has merely repeated a comment submitted before, the State Water Board cannot divine what the commenter believes has been adequately satisfied and what has not, nor can it determine the reason for any remaining dissatisfaction. State Water Board staff will review the San Diego Water Board's responses to ensure that they are thorough and address the specific question presented.
1.1	Cheryl Filar	"The City believes the TMDL should include exceedance frequencies for dry weather	The San Diego Water Board adopted the TMDLs using a 0 percent dry weather allowable exceedance

		similar to those included for wet weather. Moreover, the Regional Board has not provided a sufficient rationale for why it is supportive of including a wet weather exceedance frequency that is based on a reference system in another region, but requires a region-specific study to establish a dry weather exceedance frequency."	frequency as an initial allowable exceedance frequency for the dry weather TMDLs, applicable for the entire year. Because of the uncertainty associated with using a reference system that is not specific to the San Diego Region, using the most conservative dry weather allowable exceedance frequency (i.e., 0 percent) is warranted until a region specific dry weather allowable exceedance frequency is developed. The San Diego Water Board considered this a conservative approach given the lack of region-specific data that can be used to develop a region-specific set of wet and/or dry weather allowable exceedance frequencies. This conservative approach is one of the reasons the San Diego Water Board used an implicit Margin of Safety instead of an explicit Margin of Safety. Until a region-specific dry weather allowable exceedance frequency is developed, a 0 percent allowable exceedance frequency for dry weather conditions is appropriate for the dry weather TMDLs. The San Diego Water Board adopted the TMDL based on these conservative assumptions, and the State Water Board staff agrees that this approach is reasonable. In addition, it is important to note that under the existing basin plan (i.e. in absence of the TMDL) the allowable exceedance frequency for wet and dry weather is already effectively zero.
1.2	Cheryl Filar	"Another inconsistency applies to the definition of a rain event, which is currently	The triggering conditions for the MS4 Permit monitoring (0.1 inches) and the TMDL monitoring (0.2

		“days with rainfall events of 0.2 inches or greater and the following 72 hours.” This definition places Phase 1 dischargers under two different triggering conditions for wet weather sampling and thereby limits the ability of Phase 1 MS4s to coordinate TMDL monitoring with MS4 Permit monitoring. Additionally using the 0.2 inches definition creates a greater number of dry weather days over the duration of a monitoring season."	inches) overlap and samples can be collected at the same time when 0.2 inches of rainfall occurs. The 0.2 inches definition will likely create a greater number of dry weather days for TMDL monitoring, but also will likely create a lower number of wet weather days for TMDL monitoring. 0.2 inches of rain event was selected as a conservative but reasonable definition and because it was consistent with advisories issued by the California Department of Environmental Health and other environmental health agencies to avoid contact with ocean and bay water. The State Water Board finds this to be an acceptable definition but has requested an EO correction to improve clarity. The definition will change from: "days with rainfall events of 0.2 inches or greater and the following 72 hours" To: "days with rainfall events of 0.2 inches or greater, plus the following 72 hours".
1.3	Cheryl Filar	"Since the bacteria TMDL allows no exceedances of water quality objectives during dry weather days, dischargers are ultimately required to meet 100 percent achievement of water quality objectives after a storm event as large as 0.19 inches – a standard that is inconsistent with the reference system approach."	The dry weather allowable exceedance frequency of the 30-day geometric mean REC-1 water quality objective (WQO) was set at 0 percent for all waterbodies because a reference system approach was not used for dry weather applications (see also comment 1.1). State Water Board staff agrees that this is reasonable.

1.4	Cheryl Filar	"Still other inconsistencies include the unavailability of data from the NPDES program to assess wet weather TMDL compliance at beaches. Although AB411 requires monitoring at designated beaches between April 1 and October 31, the Bacteria TMDL requires monitoring during every wet weather event "at least 24 hours of the end of the storm event that occurs during the rainy season." This requirement represents new monitoring that is not specified under existing programs. In addition, while the Bacteria TMDL requires creeks to be sampled during dry weather a minimum of two locations at least monthly and during every wet event at least once within 24 hours of a storm event that occurs during the rainy season, the Copermittees' watershed compliance program features rational sampling (i.e., one-half of San Diego Country watersheds are sampled during one year and the other half during the following year). Overall, the TMDL creek monitoring scope represents a substantial increase in dry weather monitoring than was indicated by Regional Board staff in response to public comments and during the adoption hearing."	During the February 10, 2010 San Diego Water Board meeting, the staff responded to oral comments regarding the monitoring requirements and acknowledged that additional monitoring would be required to collect data during wet weather conditions. Staff also stated that in their opinion, a significant portion of the monitoring for dry weather conditions would fall within the current monitoring requirements conducted for the monitoring and reporting programs required under both the Phase I MS4 Permits and the AB411 monitoring. The State Water Board staff finds this to be an accurate response. The San Diego Water Board staff also indicated that there were already requirements in the monitoring and reporting programs that should fulfill the monitoring requirements for the TMDLs. A review of the monitoring and reporting program requirements for the San Diego County and South Orange County Phase I MS4s indicates that in addition to the dry weather monitoring that the Phase I MS4s are required to perform, the requirements include provisions for the Co-permittees to conduct special studies, including any monitoring required for TMDL development and implementation. The monitoring and reporting program requirements include additional monitoring requirements expected for the implementation of TMDLs adopted by the San Diego Water Board.
2.1	Joe Kuhn	"The Definition of a rain event in the proposed amendment is not consistent with	Please see the Response to Comment 1.2.

		the study of which it is founded upon. The February 2010 SDRWQCB response to this issue (Pg V-3) was incorrect and inadequate."	
3.1	Mo Lahsaie	"In the proposed Bacteria-I TMDL, wet days were defined as the days with rainfall events of 0.2 inches or greater plus the following 72 hours. Conversely, dry weather days are defined as days with less than 0.2 inches of rainfall observed on each of the previous 3 days (page 9 of the Resolution R9-2010-0001). As stated in the Response to Comments, this was included in the proposed TMDL prior to the inclusion of the Reference System Approach Basin Plan Amendment. By adding the Reference System Approach in the second adoption of the TMDl, the definition of wet and dry days being compared to a reference study brings the definition of wet and dry days into the forefront. Whereas the first issuance was based on loading, the second issuance is based on exceedance days and thus, the definition is integral. The City of Oceanside respectively[sic] requests that the definition of dry and wet days accurately reflect their name and be amended to define wet days as days of rainfall events of 0.1 inches or greater and the following 72 hours."	Please see the Response to Comment 1.2.

4.1	Kris McFadden	"Removal of De-listed Beaches from TMDL: The Revised Bacteria TMDL Project I contains waterbody/pollutant combinations recommended for de-listing on the draft 2008 State Board Section 303(d) list. The de-listed waterbodies were kept in the TMDL under the premise that they could be re-listed in the future. There is no requirement for pre-emptive TMDLs in the Clean Water Act and this goes against the prioritization process. The de-listed waterbodies are meeting water quality standard and should be removed from the TMDL."	Clean Water Act Section 303(d)(1) requires each state to identify waters within its boundaries not able to meet water quality standards and establish a priority ranking for such waters. In addition, section 303(d)(1) requires the establishment of TMDLs for those waters. For waters not identified and prioritized as required by section 303(d)(1), section 303(d)(3) requires the estimation of TMDLs as well. Thus, section 303(d) requires the establishment of TMDLs whether or not they are on the Clean Water Act Section 303(d) List of Water Quality Limited Segments (303(d) List). In addition, a TMDL may constitute a plan of implementation under Water Code section 13242. The adoption of bacteria TMDLs for all 20 waterbodies will ensure that the San Diego Water Board has a plan in place to address the existing and the future potential bacteria impairments, as well as fulfill the requirements of Clean Water Act section 303(d)(1) and (3).
4.2	Kris McFadden	"Definition of Wet Days: The definition of wet days in the TMDL is based on rain events of greater than 0.2 inches of rainfall and the following 72 hours. The original reference system study (Santa Monica Bay Beaches Bacteria TMDL), on which this TMDL is based, used a wet day definition of rainfall greater than 0.1 inch and the following 72 hours. By excluding all rain events between 0.1 and 0.2 inch of rainfall for	Please see response to comment 1.2.

		wet weather the TMDL does not utilize best available science or follow the scientific constrains for the study on which it is based."	
4.3	Kris McFadden	"Dry Weather Allowable Exceedance Frequency: The dry weather allowable exceedance frequency does not contain a winter dry exceedance allowance as found in similar TMDLs which used the same scientific basis. Winter dry weather flows are generally higher due to increased base flow from ground water sources. This increased transport mechanism leads to increased exceedance levels in reference systems. It also incorporates all rain events of less than 0.2 inches which skews exceedance rates under conditions of elevated wet weather flaw as demonstrated in the photographic evidence provided in Attachment 1."	The San Diego Water Board adopted the TMDLs using a 0 percent dry weather allowable exceedance frequency and 22 percent wet weather allowable exceedance frequency as initial allowable exceedance frequencies. These were considered to be conservative initial allowable exceedance frequencies by the San Diego Water Board. Because of the uncertainty associated with using a reference system that is not specific to the San Diego Region, using conservative allowable exceedance frequencies is warranted until region specific allowable exceedance frequencies are developed. This is a conservative approach given the lack of region-specific data that can be used to develop a region specific set of wet and/or dry weather allowable exceedance frequencies. This conservative approach is one of the reasons the San Diego Water Board used an implicit Margin of Safety instead of an explicit Margin of Safety. Until a set of region specific allowable exceedance frequencies is developed, the allowable exceedance frequencies selected by the San Diego Water Board for wet weather and dry weather conditions are appropriate.
4.4	Kris McFadden	"TMDL Re-opener:	TMDLs do not require any sort of "re-opener". The San Diego Water Board has the option to re-visit the

		A clearly defined schedule for the TMDL re-opener has not been included. Specific language is needed for revising the TMDL and the conditions required to amend the Basin Plan. The additional paragraph added to the Basin Plan amendment schedule statement should clearly state the necessary requirements for a TMDL re-opener."	TMDL whenever it determines that evidence warrants it. With that, San Diego Water Board as opted to put in a 5 year TMDL re-opener provision which will allow it to determine if sufficient data exist to support the initiation of a Basin Plan amendment, a subsequent Basin Plan amendment to revise the requirements and/or provisions for the implementation of these TMDL's
4.5	Kris McFadden	"Match Compliance to Risk and Safety: Multiple comments have been submitted regarding imposing a recreational water quality standard on waterways that have never had this beneficial use. This issue has not been satisfactorily addressed for the following reasons: 1) there is a requirement for provision of “sufficient evidence” prior to reviewing designated beach usage, but no indication of what data would be acceptable and: 2) many of the creeks listed do not have historical or current functional recreational bathing characteristics and should not be held to a high frequency usage designation."	Please see the response to comment 0.1.
4.6	Kris McFadden	"Misapplication of Basin Plan Water Quality Objectives: The TMDL Amendment states on page A15 that “Since coastal saltwater beaches are downstream of inland freshwater creeks,	Please see the response to comment 0.1.

		TMDLs for coastal saltwater beaches are calculated using the more conservative Entrococci REC-1 WQOs applicable to freshwater creeks (61 MPN/100mL and 35 MPN/100mL)". The numeric WQOs for Entrococci in REC-1 saltwater (104 MPN/100mL and 35 MPN/100mL), established in the Basin Plan to be protective of beneficial uses, should be applied to the coastal saltwater beaches in this TMDL. Freshwater creeks and saltwater beaches have different physical characteristics (salinity, volume, hydrology, etc.) resulting in different loading capacities and the appropriate WQOs should be applied."	
4.7	Kris McFadden	"Compliance Monitoring Directed at Human Sources: It is recommended that priority be given to those waterbodies with human sources of fecal contamination rather than sites with elevated indicator bacteria concentrations. In this way, resources can be directed, first and foremost, at areas where there is a higher human health risk. Allowance within the BLRPs and CLRPs should be provided for this human source approach."	Please see the response to comment 0.1.
4.8	Kris McFadden	"Human versus Anthropogenic Sources:	Please see the response to comment 0.1.

		Rapid method development to detect human sources of bacteria, currently underway at EPA, has not been included in the development of this TMDL. Consideration should be given for including these methods in the implementation of the TMDL."	
4.9	Kris McFadden	"Stated Use of Geometric Mean: The summer dry weather exceedance criterion is being applied, through the use of the geometric mean, in instances when the monitoring includes winter dry weather flows with rainfall of less than 0.2 inches. Inclusion of wet weather flows with natural sources of bacteria for the geometric mean provides no reasonable assurance that the dry weather exceedance criteria can be met since a rolling average is used for the calculation."	Please see the response to comment 0.1.
4.10	Kris McFadden	"Compliance Monitoring Needs to Account for Diversions: The TMDL does not take into account diversion structures as they relate to compliance monitoring."	Please see the response to comment 0.1.
4.11	Kris McFadden	"Best Management Practices (BMP) for Reducing Dry and Wet Weather Concentrations:	Please see the response to comment 0.1.

		The TMDL does not allow for compliance through load reduction strategies in either dry or wet weather. In this way, stakeholders will not be able to show progress toward TMDL goals by reducing bacteria loads through tangible BMP implementation such as irrigation control or use of low impact development (LIDs)."	
4.12	Kris McFadden	"Compliance Timeline: The timeline for wet weather compliance has been reduced from 20 years to 10 years. The City recommends this timeline be reverted back to 20 years to provide reasonable assurance that waste load allocations will be met."	For dischargers that undertake wet weather load reduction programs only for bacteria, the wet weather TMDLs must be achieved in the receiving waters as soon as possible, but no later than 10 years after the Office of Administrative Law (OAL) approval date. However, for dischargers in watersheds that undertake concurrent wet weather load reduction programs for other pollutant constituents (e.g. metals, pesticides, trash, nutrients, sediment, etc.) together with the bacteria load reduction requirements in these TMDLs, an alternative compliance schedule may be proposed and incorporated by the San Diego Water Board into the implementing orders. The wet weather TMDL compliance schedules may be extended, but no more than a total of 20 years from the date of OAL approval. Staff has reviewed this timeline and finds it reasonable. The commenter has not provided any rationale for why 10 years is insufficient time.
4.13	Kris McFadden	"Inclusion of Tecolote Creek Watershed in the TMDL:	Please see the response to comment 0.1.

		Data collected under the Tecolote Creek Bacteria Source Identification Study were not included in the TMDL. Land-use specific data were collected in the study, together with assessments of natural and anthropogenic indicator sources. Data from the Tecolote Creek investigations should be included in the modeled loads and exceedance frequencies for this watershed."	
5.1	Pedro Orso Delgado	"The TMDL should not apply to inland water bodies. The Regional or State Board should develop a reference study for inland water bodies prior to implementing a TMDL specific to inland waters. The City submitted the following comment to the Regional Water Quality Control Board on this topic: "The model upon which the TMDL is based relies on a limited data set focused on exceedances at beaches and river mouths. This data was extrapolated to develop bacteria levels for inland locations without taking into account the different conditions at inland water bodies, including reduced flow, salinity and lack of tidal influence. It is necessary to use data from inland creeks to assess the baseline percentage of exceedances for these locations, as it is likely these will be vastly different from those observed on the coast…"	A reference study for inland water bodies could be done in parallel with the TMDL. In the absence of reference study results, the TMDL relies upon data that demonstrates that the water body is impaired. The unknown result of an incomplete study does not warrant further delay. In addition, the San Diego Water Board has the option to revise the TMDL when that data becomes available. This does not provide a reason for delay in the approval of this Basin Plan Amendment.

		The Regional Boards's response failed to address the comment made. In its response, there was no discussion of why a reference study conducted at beaches and river mouths applied to inland water bodies. The Regional Board's response to the lack of a reference study for inland creeks is that they "support developing and establishing an allowable exceedance frequency ….. on data collected from reference systems in the San Diego Region." This response places the burden of developing a reference study onto the Cities and County of San Diego." "The City urges the State Board to require that a reference study for inland water bodies be conducted by the Regional Board. Until this study is completed, the TMDL should not be applied to inland water bodies."	
6.1	Paul Hartman	"The City feels that the definition of a wet weather event should be changed to "rainfall events of 0.1 inches or greater and the following 72 hours. This change is warranted for the following reasons: 1) Based on data collected under Order R9-2006-0076, the Lagoon Investigative Order, wet events that are less than 0.2	Please see response to comment 1.2.

		inches generate significant amounts of runoff which can impact downstream receiving waters. In examining data collected from storm events monitored from October 2007 through October 2008 in the Loma Alta (904.1), Buena Vista (904.2), and Agua Hedionda (904.3) Hydrologic Areas, it appears that wet weather events generating between 0.1 and 0.2" of rainfall increase flow in the Creeks between two and five times over average base flow (ambient conditions). This increase in flow can have significant impacts on receiving waters and therefore should be treated as wet weather under the TMDL. 2) The use of the wet weather event criteria at 0.1" aligns with the intent of the TMDL. As adopted, the dry weather portion of the TMDL is based on the assumption that there are no discharges of surface runoff during dry weather. The use of wet weather criteria greater than 0.2" fails to account for wet weather runoff generated from storms that are less than 0.2" and classifies all of these days where precipitation is less than 0.2" as dry weather. Studies have shown clearly that runoff is generated from events <0.2" and these should not be counted as dry weather days. Counting these events as	

		dry weather is in direct conflict with the assumption that there are no surface water discharges during dry weather. Modification of the definition of wet weather to events with precipitation greater than 0.1" would allow the TMDL to be consistent with other regulatory actions. These include the San Diego Municipal Storm Water Permit, USEPA Criteria in 40 CFR 122.21(g)(7), and Malibu Creek and Lagoon Bacteria TMDL, the Lagoon Investigative Order referenced above, and perhaps most importantly with the Leo Carrillo Reference Study used in this Bacteria TMDL."	
7.1	Cid Tesoro	"The definition of a rain event should be changed to "rainfall events of 0.1 inches or greater and the following 72 hours."	Please see the response to comment 1.2.
7.2	Cid Tesoro	"The TMDL should include allowable exceedance frequencies for dry weather similar to those included for wet weather.	Please see the response to comment 4.3.
7.3	Cid Tesoro	"Regional Board staff did not accurately represent TMDL monitoring requirements in response to public comments and during the February 10, 2010 adoption hearing."	Please see the Response to Comment 1.4
8.1	Terry Thielen	"I request that you approve the Bacteria Project 1."	Comment acknowledged.

9.1	Chris Crompton	"Inconsistent Definition of Wet Weather Days: The Beaches and Creeks TMDL defines wet weather days as "…days with rainfall events of 0.2 inches or greater and the following 72 hours". The TMDL also utilizes a 22 percent allowable exceedance frequency for wet weather based upon data from a reference study at Leo Carrillo Beach. The 22 percent exceedance frequency observed at Leo Carrillo Beach however was based upon wet weather days defined as rain events of 0.1 inches or greater and the following 72 hours. As such, the wet weather TMDLs developed as part of the Beaches and Creeks TMDL were calculated using one set of criteria while the TMDL wet weather allowable exceedance frequency was applied under a different set of conditions. It is not valid to utilize two different criteria for wet weather when developing the Beaches and Creeks TMDL. In their response to this comment, San Diego Regional Board staff did not address the discrepancy in wet weather definitions. The response stated that since the discrepancy was included in the December 2007 version of the TMDL and comments regarding the definition were not submitted at that time, no change is necessary. This response is	Please see the Response to Comment 1.2.

		inadequate, since other subsequent changes in the TMDL have made the wet weather definition discrepancy problematic."	
9.2	Chris Crompton	"No Dry Weather Allowable Exceedance Frequency: The Beaches and Creeks TMDL allows no dry weather exceedances of bacteria water quality objectives. In the Santa Monica Bay bacteria TMDLs, where Leo Carrillo Beach is also used as a reference system, dry weather is sub-divided into “summer dry” and “winter dry” weather. The Summer dry season is assigned a 0 percent allowable exceedance frequency and winter dry weather is assigned a 3 percent allowable exceedance frequency. We believe that the San Diego Regional Board has not adequately explained why it included the 22 percent wet weather allowable exceedancy frequency developed for Leo Carrillo Beach, but requires a region-specific study to establish a dry weather exceedance frequency. No rationale is provided for this inconsistent application of the reference data or what specific data would be necessary to develop a region-specific dry weather exceedance frequency or when and who would be conducting the necessary study."	Please see the response to comment 4.3.

10.1	Laura Coley Eisenberg	"RWQCB staff has not adequately explained why, in the specific TMDL: It is supportive of including a wet weather exceedance frequency that is based on a reference system in another region, but requires a region-specific study to establish a dry weather exceedance frequency, and, It inconsistently applies the reference system approach such that a zero percent dry weather allowable frequency is required when other TMDL's have split (summer dry and winter dry) allowable exceedance frequency."	Please see the Response to Comment 1.1
11.1	Jennifer Kovecses	"In our previous comment letter dated January 22, 2010 regarding Resolution No. R9-2010-0001 (hereby incorporated by reference) we raised numerous concerns, which primarily focused on the use of the reference system approach and the 22% allowable exceedance frequency. We do not wish the co-permittees to expend resources trying to treat or manage natural sources of bacteria. However, we do believe that without an appropriate local dataset to determine a realistic and local level of naturally derived bacteria, we will increase the risk of people being exposed to pathogens that could otherwise be controlled.	Please see the Response to Comment 1.1.

		The most precautionary approach would be to set the natural exceedance rate of 0% until a local dataset can be vetted."	
11.2	Jennifer Kovecses	"Additionally, we are still concerned about the long compliance schedule for this TMDL. The lengthy timeframe outlined by this TMDL will continue to put resident and tourist health at risk for too long."	State Water Board staff agrees that a compliance schedule of 10 years is adequate for this type of TMDL. The 20 year compliance schedule only applies to dischargers in watersheds that undertake concurrent wet weather load reduction programs for other pollutant constituents (e.g. metals, pesticides, trash, nutrients, sediment, etc.) together with the bacteria load reduction requirements in these TMDLs. Dischargers that undertake a combined approach may propose an alternative compliance schedule, which would be incorporated by the San Diego Water Board into the implementing orders. The wet weather TMDL compliance schedules may be extended from 10 years under these circumstances, but may be no more than a total of 20 years from the date of OAL approval.