COMMENT SUMMARY AND RESPONSES

TMDL FOR INDICATOR BACTERIA IN THE SANTA CLARA RIVER ESTUARY AND REACHES 3, 5, 6, AND 7 (Noticed for public comment on April 21, 2010)

List of Public Review Comment Letters
1. City of Fillmore, June 7, 2010
2. Santa Clarita Valley Sanitation District of Los Angeles County , June 7, 2010
3. Ventura County Agricultural Irrigated Lands Group, June 3, 2010
4. Ventura County Watershed Protection District, June 4, 2010
5. Heal the Bay, June 7, 2010
6. City of Santa Clarita, June 7, 2010
7. City of Santa Paula, June 7, 2010
8. Resource Conservation District Ventura County, June 1, 2010
9. Environmental Protection Agency, June 7, 2010
10. County of Los Angeles: Flood Control District, June 7, 2010
11. County of Los Angeles, June 7, 2010
12. Newhall Land, June 7, 2010

Number	Comment	Response
City of Fillmore		
1.1	Thank you for the opportunity to comment on the Draft Santa Clara River Fecal Indicator Bacteria Total Maximum Daily Load (FIB TMDL). Overall, the City's request is that the Regional Board Interim Executive Officer contact the Environmental Protection Agency and ask for them to renegotiate a longer timeline for the Santa Clara River FIB TMDL to allow for more accurate analysis of the sources and causes of FIB impairment.	At the June 3, 2010 Regional Board meeting, the Director of EPA Region IX Water Division stated that EPA would not negotiate any additional changes to the consent decree beyond what they had already agreed to with NRDC, Heal the Bay, and Santa Monica Baykeeper (plaintiffs) in the consent decree revision noticed on April 12, 2010.

Number	Comment	Response
1.2	**Watershed Based Compliance Liability** The TMDL makes the City of Fillmore liable for penalties and violations outside of its control. If there is an exceedance 20 miles downstream of Fillmore and Fillmore's discharge is in compliance with WLA we are still liable per Section 8.2. One of the problems with this section is that our bacterial source could be less than the WLA but still be found to "contribute to the exceedance." Another problem is that the parties being held responsible are only the "responsible jurisdictions and/or responsible agencies." This leaves out the other dischargers such as septic system owners, equestrian parks, owners of farm animals, etc. who are more than likely, high dischargers of bacterial sources. Therefore we recommend the following revision to Section 8.2 ***(revision shown in bold italics)***: "If the number of exceedance days is greater than the allowable number of exceedance days, the responsible ***parties,*** jurisdictions and/or responsible agencies shall be considered not attaining the WLAs. Responsible jurisdictions or agencies shall not be deemed non-attaining if the investigation described in the paragraph below demonstrates that bacterial sources originating within the jurisdiction of the responsible agency have not ***exceeded their*** *WLA* ***or LA.*** ~~caused or contributed to the exceedance~~" The following paragraph in Section 8.2 should also be revised to read: "If an in-stream location is non-attaining as	The proposed TMDL has been modified to revise the implementation and monitoring language to better explain compliance. In addition, the proposed TMDL has been modified to include municipal separate storm sewer system (MS4) outfall monitoring requirements. The outfall monitoring will be used to demonstrate MS4 compliance with waste load allocations and will exclude any potential contributions from other sources outside the MS4 system. However, because the outfall discharges can be commingled discharges from each of the co-permittees, MS4 dischargers are jointly and severally liable for discharges from the common storm drain system unless the dischargers can demonstrate that their discharges did not contribute to the exceedances coming from the outfall.

Number	Comment	Response
	determined in the previous paragraph, the Regional Board shall require responsible agencies ***parties*** to initiate an investigation, which at a minimum shall include daily sampling at the existing monitoring location until all single sample events meet bacteria water quality objectives."	
1.3	**Changed Conditions** This TMDL should not be implemented for Reach 3 because of dramatically changed conditions in the reach since the data was collected upon which the draft TMDL is based. The Fillmore Waste Water Treatment Plant stopped all discharge to the Santa Clara River on August 18, 2009 and the Santa Paula Treatment Plant stopped all discharge in May of 2010. Therefore the bacteria emissions from these two major sources has been eliminated. More time should be provided for new monitoring that will reflect the changed conditions within Reach 3.	The monitoring program of the TMDL will provide information on potential changes in coliform concentrations in Reach 3 since the Fillmore and Santa Paula waste water treatment plants have stopped all discharges to the river. The TMDL will be reconsidered four years after the effective date of the TMDL if updated information reflects changed conditions within Reach 3.
1.4	**Delay for more study and EPA renegotiation** While the City appreciates the efforts made, it is clear from reading the draft FIB TMDL that there is not enough evidence to link sources with receiving water data. The storm drains exiting the City of Fillmore have never been monitored for bacteria so it is unknown if the discharges are even contributing to the exceedances. In fact the data shown in Table 2-6 indicate the river flow upstream of the City has existing exceedances. It is not possible to adequately deal with FIB until such linkages are better understood. It has been clear that the settlement agreement between EPA and the environmental community is driving the timeline, and	The proposed TMDL is supported by science and the source assessment and linkage analysis justify the assignment of waste load allocations to discharges from the MS4. While there are no outfall monitoring data, land use-specific stormwater monitoring data collected in Reaches 1 and 2 as well as other technical studies in the greater Los Angeles region support the conclusion that discharges from the MS4 to the river are contributing to bacteria exceedances at mass emission stations. Additionally, local natural landscape monitoring shows no exceedances of bacteria objectives in natural areas (see response to comment 4.6). This cumulative evidence leads to the conclusion that MS4 discharges are a source of bacteria to the river. Therefore, the TMDL assigns waste load allocations to MS4 dischargers, as required.

Number	Comment	Response
	not science. Without the science to adequately link the sources of the bacteria to any particular discharge type, the TMDL is flawed and should not move forward. Therefore, the City respectfully requests that you ask the EPA to renegotiate the timeline in the settlement agreement with the environmental community. Recently, the EPA has requested changes in that settlement agreement successfully. We ask that we be given the same consideration.	The TMDL also recognizes the potential contribution from other point sources and nonpoint sources in the watershed and assigns waste load and load allocations to these sources as well. The proposed TMDL has been modified to include MS4 outfall monitoring to ensure that municipalities are only held accountable for their own discharges. No delay in TMDL adoption is needed. Furthermore, at the June 3, 2010 Regional Board meeting, the Director of EPA Region IX Water Division stated that EPA would not negotiate any additional changes to the consent decree beyond what they had already agreed to with NRDC, Heal the Bay, and Santa Monica Baykeeper (plaintiffs) in the consent decree revision noticed on April 12, 2010. Therefore, to allow adequate time for the TMDL to progress through the state and federal approval process prior to EPA's deadline to approve or establish the TMDL, it is necessary for the Regional Board to proceed.
Santa Clarita Valley Sanitation District of Los Angeles County		
2.1	**<u>Substitute Environmental Documents</u>** The SEDs do not adequately address the environmental impacts of compliance measures to meet the WLAs during wet weather conditions. The SEDs contemplate that certain BMPs will be employed to meet the WLAs, but do not specifically mention BMPs that could be used to achieve compliance during wet weather. If it is simply assumed that dry weather BMPs will be scaled up to accommodate wet weather flows, the SEDs do not	The SED includes a discussion of numerous reasonably foreseeable implementation alternatives, some of which could be employed in wet weather, dry weather, or both. The regional and sub-regional structural BMPs analyzed in the SED, such as infiltration basins, detention basins, and media filters, are specifically designed to treat wet-weather flows - they are stormwater treatment facilities. The discussion of these BMPs focuses on the fact that they are intended to reduce the volume of storm runoff and peak flows. This is discussed at length in the SED (see Section 5). The SED contemplates the implementation of very large sub-

Number	Comment	Response
	adequately consider the environmental impacts associated with construction and operation of the infrastructure needed to handle the massive volumes of runoff present during wet weather, such as expanded treatment capacity for urban runoff and large storage tanks to minimize peak flows. Furthermore, many of the BMPs mentioned as compliance options for the TMDL will either be ineffective or cannot be employed during wet weather. With respect to the Sanitation District's collection system, diversions of dry weather urban runoff would only be allowed if excess capacity is available, a connection fee has been permitted and paid for, and it has been determined that no constituents are present that may cause an exceedance of any existing or proposed wastewater treatment plant discharge limitation. Diversion of urban runoff is strictly prohibited during wet weather conditions to safeguard against sanitary sewer overflows, and to ensure that treatment plant capacity is not exceeded. Because diversions to wastewater treatment plants are not allowed during wet weather, the SEDs should be corrected to remove any references to such diversions.	regional BMPs when analyzing potential environmental impacts due to construction and operation and proposing mitigation measures. For example, under Earth 1.a., the SED states, "If responsible parties install infiltration facilities on a scale that could result in unstable earth conditions or in changes in geologic substructures, potential impacts could be avoided through proper geotechnical investigations, siting, design, and ground and groundwater level monitoring to ensure that infiltration BMPs are not employed in areas subject to unstable soil conditions." It appears that the commentor is mainly concerned with the discussion of diversion to treatment facilities as an implementation alternative. Diversion and treatment is just one of many implementation alternatives discussed in the SED. The discussion of diversion and treatment focuses on dry-weather flows, but notes that diversion and treatment could also treat a portion of wet-weather flow. The SED does not specify that the dry-weather flow or a portion of the wet-weather flow would be diverted to a sanitary sewer system, and in fact discusses the possibility of constructing a separate runoff treatment facility (see section 5.2.1). No change is necessary.
2.2	**<u>Beneficial Use Suspensions</u>** Contact recreation in the Santa Clara River (Water Contact Recreation or REC-1 beneficial use) is not legally allowed under certain low flow scenarios, in order to protect resident endangered species, or during dangerous high flow situations. The TMDL	Staff already evaluated the extension of the high flow suspension of the REC-1 use and associated bacteria objectives to a broader array of channels and time periods when developing the "Amendment to Suspend Recreational Beneficial Uses in Engineered Channels during Unsafe Wet Weather Conditions," Final Resolution and Amendments (as adopted on July 10, 2003). Staff determined that a high flow suspension was only

Number	Comment	Response
	should not require measures to attain a beneficial use that would end up threatening endangered species or endangering the safety of the potential users. Because the TMDL is in itself a Basin Plan amendment, it is within the scope of TMDL to address these necessary beneficial use suspensions. The Sanitation District recommends that the Regional Board contact the Los Angeles and Ventura County Fire Departments and California Department of Fish and Game regarding conditions under which water contact recreation is suspended by each agency, and include beneficial use suspensions in the TMDL that accurately reflect these agencies restrictions.	appropriate under certain conditions. Using available information, staff identified those water body segments that for their entire length meet the definition of an engineered flood control channel. Engineered channels are defined as inland, flowing surface water bodies with a box, V-shaped or trapezoidal configuration that have been lined on the sides and/or bottom with concrete. Channelization of waterbodies or waterbody segments in the Los Angeles Region was carried out for the express purpose of conveying storm flows as quickly as possible to the ocean. This, among other considerations, was the premise for the suspension of the recreational uses in engineered channels during storm events that resulted in "swiftwater conditions." The Regional Board considered and rejected applying this suspension to natural channels during the development of the High Flow Suspension amendment to the Basin Plan. As necessary data become available, staff intends to develop a similar amendment for engineered channels in Ventura County. If and when such an amendment is adopted, the Regional Board may reconsider the TMDL to make any necessary revisions in light of a high flow suspension of the recreational beneficial uses. Regarding the requested suspension of recreational uses where the Department Fish and Game restricts contact (presumably through streambed alteration agreements), a use attainability analysis must be conducted before a use can be removed, and such an analysis has not been undertaken. Furthermore, the Basin Plan contains many instances where a waterbody is designated for both (1) recreational beneficial uses and (2) rare, threatened, or endangered species beneficial uses. The two beneficial use designations are not contradictory and must both be protected.

Number	Comment	Response
2.3	**<u>Wildfire Incorporation</u>** The Sanitation District recommends that the Regional Board determine the reason that watersheds that have experienced wildfires in the previous three years were excluded from the reference system used to develop the TMDL. Wildfires are naturally occurring events in the Santa Clara River Watershed and cannot be controlled by the TMDL regulated community. If the impact of wildfires on water quality is significant enough to exclude entire areas as reference systems, then the TMDL should incorporate specific exclusions for wildfires when they occur or have occurred recently within the watershed.	Streams that were impacted by wildfires were excluded from the Southern California Coastal Water Research Project (SCCWRP) study "Assessment of Water Quality Concentrations and Loads From Natural Landscapes (Technical Report No. 500)", from which sampling sites were chosen as reference sites for this TMDL. According to Technical Report No. 500, the criteria for site exclusion were established through a literature survey and meetings with the project's technical advisory committee and stakeholders to ensure that sampling would capture natural conditions without influence from any land-based anthropogenic input and be representative of the range of natural conditions that exist in southern California. The criteria included an exclusion of catchments that had burned during the previous three years because wildfire produced major changes in stream morphology and composition. These fire-induced landslides and siltation eliminated pools and runs, and altered habitats. Wildfires are not considered in this TMDL because the impact of wildfires on natural loading of coliforms to surface waters is unknown at this time, the occurrence of wildfires is unpredictable, and no wildfires have occurred in the watershed in the previous three years.
2.4	In addition to these specific comments, the Sanitation District would like to support the comments made in the City of Santa Clarita's comment letter regarding this TMDL.	Comment noted.

Number	Comment	Response
Ventura County Agricultural Irrigated Lands Group		
3.1	***E. coli* Numeric Targets** The VCAILG appreciates the Regional Board acknowledgment of new efforts currently addressing more appropriate water quality objectives for freshwater Rec-1 beneficial uses. By utilizing targets for *E. coli* only for freshwater reaches of the Santa Clara River, Regional Board staff is implementing new standards and policies which will most likely be in place by the effective date of this TMDL. *E. coli* is the preferred indicator for freshwater as identified in the 1986 *USEPA Ambient Water Quality Criteria for Bacteria*, which is the basis of the Basin Plan WQOs. According to the 1986 *USEPA* guidance, *E. coli* provides equivalent protection to recreational uses as fecal coliform and could therefore be used as the sole target in the TMDL. Additionally, the use of *E. coli* objectives only and the removal of fecal coliform objectives are listed as one of the issues to be considered by Regional Water Board staff during the Triennial Review.	Comment noted.
3.2	**Inclusion of a High Flow Exemption** A high flow exemption for the reaches of the Santa Clara River in Ventura County should be included in this TMDL. During high flow conditions, REC1 and REC2 bacterial indicator WQOs should be suspended in identified channels within the Santa Clara River watershed where the wet weather events and resulting high flows create physically unsafe conditions. Los Angeles Regional Board Resolution 2003-010 created a limited temporary suspension of the water contact recreational uses for various water	Staff already evaluated the extension of the high flow suspension of the REC-1 use and associated bacteria objectives to a broader array of channels and time periods when developing the "Amendment to Suspend Recreational Beneficial Uses in Engineered Channels during Unsafe Wet Weather Conditions," Final Resolution and Amendments (as adopted on July 10, 2003). Staff determined that a high flow suspension was only appropriate under certain conditions. Using available information, staff identified those water body segments that for their entire length meet the definition of an engineered flood control channel. Engineered channels are defined as inland, flowing surface

Number	Comment	Response
	body segments in Los Angeles County. This was based on the results of a use attainability analysis, which determined that REC1 and REC2 uses are not fully attainable in concrete lined channels during storm events of 0.5 inch or greater – and the 24 hrs following the rain event. The Santa Ana Regional Water Board is preparing to consider a suspension of REC1 and REC2 beneficial uses during wet weather that contains approaches that could be viable for the Santa Clara River (i.e. the exemption applies for storms greater than 0.5 inches that generate a specified amount of flow in the river). High flow conditions should be defined for this purpose, and not solely applied to only concrete lined channels, and a standardized suspension policy should be adopted during this effort that can be utilized watershed wide. The high flow conditions and suspension policy should be developed to ensure that it is clear when and where the WQOs apply and to create consistency in implementation of policies for the Santa Clara River watershed for both LA and Ventura Counties.	water bodies with a box, V-shaped or trapezoidal configuration that have been lined on the sides and/or bottom with concrete. Channelization of waterbodies or waterbody segments in the Los Angeles Region was carried out for the express purpose of conveying storm flows as quickly as possible to the ocean. This, among other considerations, was the premise for the suspension of the recreational uses in engineered channels during storm events that resulted in "swiftwater conditions." The Regional Board considered and rejected applying this suspension to natural channels during the development of the High Flow Suspension amendment to the Basin Plan. As necessary data become available, staff intends to develop a similar amendment for engineered channels in Ventura County. If and when such an amendment is adopted, the Regional Board may reconsider the TMDL to make any necessary revisions in light of a high flow suspension of the recreational beneficial uses.
3.3	**TMDL Implementation and Monitoring through the Conditional Waiver for Irrigated Lands** The use of the Conditional Waiver for Irrigated Lands as the mechanism for fulfilling implementation and monitoring requirements of this TMDL is appreciated. The VCAILG believes that this approach will avoid duplication of efforts on behalf of agricultural growers and landowners working to comply with the Conditional Waiver, TMDLs and food safety requirements.	Comment noted.

Number	Comment	Response
3.4	**Re-Evaluation of Standards, Objectives, and Sources** As noted earlier, we appreciate Regional Board staff incorporating new policies directly resulting from the vast array of research, studies, and policy evaluations being conducted in Southern California. The application of utilizing only *E. Coli* in freshwaters is a direct outcome of these efforts, yet this was only one small piece of the numerous ongoing projects most likely to be completed within the next two years. Much work is still taking place that may ultimately impact numerous components of this TMDL. We respectfully request that to incorporate these findings and outcomes of these studies, a TMDL reopener be included in the Tentative BPA schedule, and suggest the TMDL be reviewed to incorporate new information on an annual basis or at the very least, three years after the effective date. Without this being included in the BPA schedule, we believe it will be difficult and extremely challenging to incorporate new information that may ultimately assist in meeting final compliance deadlines.	The proposed TMDL has been modified to incorporate reconsideration four years after the effective date of the TMDL if monitoring and any voluntary local reference system studies justify a revision, or if US EPA publishes revised recommended bacteria criteria.
Ventura County Watershed Protection District		
4.1	The following comments presented in this letter refer to both the Staff Report and the Tentative BPA. Additionally, on February 17, 2010, we submitted a comment letter highlighting, discussing, and summarizing a general approach of the key issues that we had identified as concerns with the development of the bacteria TMDL in the SCR (Attachment 1).	Regional Board staff appreciates the early input by the Watershed Protection District in the development of the TMDL. Staff considered the comments provided in the February 17, 2010 comment letter when developing the proposed TMDL.

Number	Comment	Response
4.2	**Enforcement of Exceedances** We have identified a very serious general concern in this review process. It has become questionable how the Regional Board will address any exceedances day violations once compliance deadlines are in place for both dry and wet weather. If we were to address all possible bacteria sources originating from County owned lands, we would like to better understand how the Regional Board would separate exceedances per responsible party. We are very concerned that once the controllable urban sources are addressed, we may still be deemed responsible for a non-compliance situation. We were not able to identify any language that explains what policy or mechanism the Regional Board has in place to address this possible situation. **Requested Action:** A revision of both the Staff Report and Tentative BPA to include language that clearly states how the Regional Board will address this possible scenario.	The proposed TMDL has been modified to include MS4 outfall monitoring requirements and a discussion of how the outfall monitoring data will be used to determine compliance with waste load and load allocations. The outfall monitoring will be used to demonstrate MS4 compliance with waste load allocations and will exclude any potential contributions from other sources outside the MS4 system. However, because the outfall discharges can be commingled discharges from each of the co-permittees, MS4 dischargers are jointly and severally liable for discharges from the common storm drain system unless the dischargers can demonstrate that their discharges did not contribute to the exceedances coming from the outfall.
4.3	**Non-point Source Program** Both the Staff Report and Tentative BPA, reference a "Non-point Source Program" for addressing load allocations (LAs) originating from natural landscapes, wildlife, golf courses, and horses and livestock. At this time, we are unclear how this program will work or when the program will be started. Nor could we identify references to the program structure. We are greatly concerned that this program will not be created in time to	The draft staff report and tentative BPA have been revised to correctly reference the existing Nonpoint Source Implementation and Enforcement Policy and to specify the types of nonpoint sources that are assigned load allocations. The draft staff report has also been revised to provide a summary of the regulatory authorities outlined in the policy, including waste discharge requirements, waivers, or prohibitions, that may be used to implement the load allocations.

Number	Comment	Response
	address other non-point sources not currently addressed via some regulatory permit or waiver by the first compliance deadline of the SCR Bacteria TMDL. As stated in the Staff Report, the SCR watershed is dominated by open space and rural lands most likely falling under the jurisdiction of the non-point source program. **Requested Action:** We request Regional Board staff elaborate on the program, including a general approach to the structure of the program, types of dischargers and/or land use types covered, and a tentative schedule when the program will be initiated. In addition, we would like to suggest language that further clarifies and clearly identifies the non-point sources. **Requested Action:** Add the following to the Staff Report page 53 Section 6.4 "LAs" and Tentative BPA page 5 under implementation: *LAs for natural landscapes, wildlife, golf courses, horses and livestock, and other unidentified non-point sources will be implemented through the Non-point Source Enforcement Policy.*	
4.4	**Regional Bacteria Studies and Research Efforts** While we appreciate the references to the work completed during the Los Angeles River Bacteria TMDL effort, we would request that further language be incorporated in the Tentative BPA that allows for updates and revisions based upon results as on-going efforts are completed. While -	The proposed TMDL has been modified to incorporate reconsideration four years after the effective date of the TMDL if monitoring and any voluntary local reference system studies justify a revision, or if US EPA publishes revised recommended bacteria criteria.

Number	Comment	Response
	not a traditional approach in this region, we feel this component would be vital to successfully addressing the true sources of impairment to the SCR. **Requested Action:** A TMDL reopener three years after the effective date to be included in the Tentative BPA implementation schedule.	
4.5	**Water Quality Objectives Update** Section 2.1.2 Water Quality Objectives (WQO) state "...The *revised objectives include geometric mean limits and single sample limits for total coliform,, fecal coliform, E. Coli, and Entrococcus" (page 19).* The WQO should be consistent with the proposed update of bacteria objectives for fresh waters. The update replaces the fecal and total coliform objectives with *E. Coli* objective as the sole indicator for REC-1 in fresh waters. In the Staff Report the indicator information is inconsistent between the WQO statement and the Numeric Targets listed in Table 3-1 (page 33). **Requested Action:** Language be added to Section 2.1.2 to clarify the applicable WQOs for marine and freshwater environments and revise the Table 2-2 (page 20) to remove fecal coliform for Reaches 3, 5, 6, and 7 (freshwater REC-1). This revision would ensure consistency with the proposed update and avoid any confusion in the Staff Report.	The Regional Board will consider an update of bacteria objectives for fresh waters on July 8, 2010. To reflect this, the numeric targets for fresh waters in the proposed TMDL are for *E. coli* only. The WQOs for SCR Reaches 3, 5, 6 and 7 stated in Section 2.1.2 are existing WQOs for *E. coli* and fecal coliform, because the update of WQOs has not been finalized yet.

Number	Comment	Response
4.6	**Open Space and Source Assessment** Open space accounts for about 90.5% of the SCR watershed. We are concerned about MS4 dischargers being required to achieve receiving water bacteria concentrations when data on the sources of bacteria to the SCR are limited and contribution from natural sources may be significant. There are too many complex factors and variables contributing to bacterial presence in the SCR watershed to require MS4 dischargers to be solely responsible for levels of indicator species in the receiving water. Although we recognize that the reference reach approach is designed to address natural sources, we are concerned that the approach may not address all of the natural sources of bacteria in the waterbody such as regrowth, natural bacteria in in-stream sediment, and others. Without sufficient information on open space bacteria contributions, it will not be possible to assess whether controlling urban sources of bacteria will result in the achievement of water quality objectives. The Regional Board staff conclusions are contradictory to the scientific results found in SCCWRP Technical Report No. 542 titled "Fecal Indicator Bacteria (FBI) Levels During Dry Weather from Southern California Reference Streams" January 2008, which indicates that *"Natural areas can also be a source of bacteria originating from wildlife, including birds and mammals pets, and livestock".* The Technical Report also referenced other studies and recognized that natural sources	Staff believes that the modifications to the proposed TMDL to include MS4 outfall monitoring requirements and to incorporate TMDL reconsideration will address this concern. The outfall monitoring will be used to demonstrate MS4 compliance with waste load allocations and will exclude any potential contributions from other sources outside of the MS4 system. The TMDL reconsideration will take into account any new information about other factors and variables contributing to bacterial presence in the watershed. The draft TMDL staff report does not contradict the findings of SCCWRP Technical Report No. 542. While the introduction to Report No. 542 states that natural areas can also be a source of bacteria, the conclusions of the report state that “fecal indicator bacteria typically occur in natural streams during dry weather conditions at levels below State water quality standards,” and “dry weather fecal indicator bacteria in natural streams are typically two orders of magnitude lower than those observed in streams draining developed watersheds.” In other words, there are fecal bacteria of non-human origin in natural streams, but they do not exceed standards and are at levels much lower than in streams that drain developed areas. The report’s conclusion that dry weather fecal indicator bacteria levels were one to two orders of magnitude lower than those observed in natural streams during storm

Number	Comment	Response
	could be significant contributors to total bacteria level in urban storm water in Southern California. Additionally, the SCCWRP study concludes that *"Fecal indicator bacteria in natural streams are most likely of non-human origin".* The study goes further concluding that *"Dry weather fecal indicator bacteria levels were one to* two *orders of magnitude lower than those observed in natural streams during storm conditions ".* **Requested Action:** We request Regional Board staff re-assess open space and source assessment to adequately include background and natural sources of bacteria.	conditions just means that bacteria in natural streams were lower in dry weather than in wet weather. It is not clear how this conclusion is contradicted by the TMDL staff report and Basin Plan amendment, which allow a higher level of exceedance during wet weather based on the reference system approach. Finally, the site specific data collected from Sespe and Piru Creeks in the Santa Clara River watershed as part of SCCRWP Technical Report No. 500 show no exceedances of standards. No change is needed to re-assess open space contributions, but staff has proposed reconsideration of the TMDL four years after the effective date, and additional monitoring to address concerns.
4.7	**Source Analysis** The Tentative BPA states on page 3, Source Analysis that *"The major contributors of bacteria loading to the SCR and Estuary are dry and wet-weather urban runoff discharges from the storm water conveyance system[...] Based on this information, staff concludes that runoff from urban areas served by the storm drain system is most likely the largest source of bacteria ".* We believe these conclusions inaccurate, and not supported by the existing data. We recognize that collected urban runoff data showed some exceedances of bacterial concentrations, and might provide evidence of MS4's as potential contribution to bacterial presence in the SCR. However, the evidence does not support the statement that MS4's are the largest source of bacteria simply	Staff agrees that there may be a variety of sources contributing to exceedances of bacteria objectives at the mass emission station. While there are no outfall monitoring data, land use-specific stormwater monitoring data conducted in Reaches 1 and 2 as well as other technical studies in the greater Los Angeles region support the conclusion that MS4 discharges to the river are contributing to bacteria exceedances at mass emission stations. Additionally, local natural landscape monitoring shows no exceedances of bacteria objectives in natural areas (see response to comment 4.6). This cumulative evidence leads to the conclusion that MS4 discharges are a source of bacteria to the river. Therefore, the TMDL assigns waste load allocations to MS4 discharges, as required. The TMDL also recognizes the potential contribution from other point sources and nonpoint sources in the watershed and assigns waste load and load allocations to these sources as well.

Number	Comment	Response
	due to no data or limited data being available. The data for Reach 3 were collected from an **in-stream** Mass Emissions Station (ME-SCR). The monitoring results represent indicator concentrations in the receiving water **originating from a variety of sources**, and not only MS4 discharges. The SCR Watershed is only about 8% urban and limited data exist on bacteria concentrations from open space in the watershed. Secondly, point source and nonpoint source runoff from open space, agriculture, urban, and other sources contribute to indicator loads detected at the in-stream ME-SCR sampling location. **Requested Action:** We request Regional Board staff re-analyze the ME-SCR data to include all possible point and non-point sources of bacteria.	No change is needed to re-analyze mass emission data. The contribution from other sources has already been considered and these sources have been assigned allocations.
4.8	**Inclusion of Reach 3** It is our understanding that the SCR Reach 3 is being listed as impaired for bacteria concentrations concurrently with the development of the SCR TMDL based upon the analysis of the ME-SCR data per Section 1.1 *Regulatory Background* (page 9). We believe this was based upon incorrect assumptions and conclusions previously explained above in the Technical Comment No. 2. Consequently, we believe it is premature to include SCR Reach 3 in this TMDL at this time since no clear understanding of the sources of bacteria is presented. Additionally, with the adoption of the new Ventura County NPDES	The finding of impairment in Reach 3 was made based on the requirements of the State Board Listing Policy. It is not necessary to identify all potential sources (although the TMDL draft staff report does this) to make a listing decision.

Number	Comment	Response
	Permit in May 2009, we are instituting a number of new requirements on urban stormwater discharges countywide. Implementation of the Permit requirements is likely to reduce the bacteria concentrations originating from the MS4. The implementation of programs and Best Management Practices may be sufficient to address bacteria concentrations through other mechanisms, such as a Category 4B listing. **Requested Action:** We respectfully request the Regional Board **not list the SCR Reach 3** in the SCR TMDL for the reasons and rationale described above.	Staff cannot recommend a Category 4B listing without a finding that the source of bacteria can be controlled by a single regulatory mechanism. Based on the source assessment and the commentor's previous comment, it is not clear that implementing the requirements of the existing MS4 permit will completely address the bacteria impairment since there are numerous potential sources of bacteria.
4.9	**Numeric Targets** E. *coli* is the preferred indicator for freshwater as identified in the 1986 *USEPA Ambient Water Quality Criteria for Bacteria,* which is the basis of the Basin Plan WQOs. According to the 1986 *USEPA* guidance, WQOs established for E. *coli* provide equivalent protection to recreational uses as do WQOs for fecal coliform and could, therefore be used as the sole target in the TMDL. Additionally, the use of *E. colt* objectives only and the removal of fecal coliform objectives are listed as one of the issues to be considered by Regional Board staff during the Triennial Review. **Requested Action:** We support the Regional Board staff recommendation not to include targets for fecal, and total coliform and utilize targets for E. *coli* only.	Comment noted.

Number	Comment	Response
4.10	**Linkage Analysis** Although the analysis is consistent with the approach used in other Los Angeles Region Bacteria TMDLs as stated on page 48, Linkage Analysis; unfortunately, the critical conditions analyses do not reflect consistency. Although it is stated by the Regional Board staff that wet weather is found to be a critical condition, the SCR TMDL does not include a high flow exemption. During certain high flow conditions, beneficial uses may be unattainable due to the risk of drowning and injury, at which time the designated use should be temporarily suspended and bacteria criteria would not apply. A high flow exemption is already in place for some Los Angeles County waterbodies and should be included for the SCR. In addition, the Santa Ana Regional Board is considering a suspension of REC1 and REC2 beneficial uses during wet weather (CEQA scoping meeting conducted on January 28, 2010), which can be a viable approach for the SCR (i.e. the exemption applies for storms greater than 0.5 inches that generate a specified amount of flow in the river). We believe that consideration of these issues should be included in the SCR TMDL. **Requested Action:** We request Regional Board staff consider and include a high flow exemption for the SCR TMDL.	Staff already evaluated the extension of the high flow suspension of the REC-1 use and associated bacteria objectives to a broader array of channels and time periods when developing the "Amendment to Suspend Recreational Beneficial Uses in Engineered Channels during Unsafe Wet Weather Conditions," Final Resolution and Amendments (as adopted on July 10, 2003). Staff determined that a high flow suspension was only appropriate under certain conditions. Using available information, staff identified those water body segments that for their entire length meet the definition of an engineered flood control channel. Engineered channels are defined as inland, flowing surface water bodies with a box, V-shaped or trapezoidal configuration that have been lined on the sides and/or bottom with concrete. Channelization of waterbodies or waterbody segments in the Los Angeles Region was carried out for the express purpose of conveying storm flows as quickly as possible to the ocean. This, among other considerations, was the premise for the suspension of the recreational uses in engineered channels during storm events that resulted in "swiftwater conditions." The Regional Board considered and rejected applying this suspension to natural channels during the development of the High Flow Suspension amendment to the Basin Plan. As necessary data become available, staff intends to develop a similar amendment for engineered channels in Ventura County. If and when such an amendment is adopted, the Regional Board may reconsider the TMDL to make any necessary revisions in light of a high flow suspension of the recreational beneficial uses.
4.11	**Implementation Plan and Schedule** As listed previously, the implementation plan should include clear reconsiderations to evaluate	The proposed TMDL has been modified to incorporate reconsideration four years after the effective date of the TMDL if monitoring and any voluntary local reference system studies

Number	Comment	Response
	and consider new data and information, when available. Unfortunately, the Tentative BPA on page 8, Table 7-36.3 does not include a reopener in the implementation schedule. Furthermore, the TMDL reopener should allow for adjustments to targets, waste load allocations, and implementation schedule. **Requested Action:** We request Regional Board staff include a reopener of the SCR TMDL **three years after the effective date.**	justify a revision, or if US EPA publishes revised recommended bacteria criteria.
4.12	A TMDL implementation timeframe of 30 years similar to implementation schedule of the Los Angeles River Bacteria TMDL is absolutely necessary for the MS4 dischargers to raise the necessary funding and to successfully implement and monitor control measures, especially given the uncertainty in the data and sources for this TMDL and the difficulty in addressing bacteria discharges. **Requested Action:** We request Regional Board staff consider a compliance timeframe based upon the resource necessary to achieve the load reductions specified in the TMDL.	Land uses in the SCR watershed are 90.5% open space, 3.2% agriculture, 1.5% high density residential, and 1.2% low density residential. The developed area in SCR watershed is similar to the area of the Ballona Creek, Ballona Estuary, and Sepulveda Channel Bacteria TMDL, and a similar implementation time frame was given for the proposed SCR TMDL.
4.13	Furthermore, a comprehensive monitoring plan is required to be submitted six months after the effective date of the SCR TMDL for Executive Officer's approval. Given the size of the watershed, multi-agency monitoring plan, extremely difficult economic climate, and complexity of the problem,	The TMDL will be reconsidered four years from the effective date of the TMDL if monitoring and any voluntary local reference system studies justify a revision, or if US EPA publishes revised recommended bacteria criteria. The time to submit a monitoring plan has been extended from six months to one year, as requested.

Number	Comment	Response
	we consider that **the allowed timeframe is insufficient** to generate a meaningful and comprehensive bacteria water quality monitoring plan for the SCR Watershed. **Requested Action:** We request Regional Board' staff reconsider and extend the timeframe allowed to one year for submittal of the water quality monitoring plan.	
Heal the Bay		
5.1	**The Regional Board should include WLAs for Santa Clara River Reaches 1, 2 and 4.** The scope of the Draft TMDL is limited to the Santa Clara River Estuary and Reaches 3, 5, 6, and 7. We are concerned that other reaches and tributaries, including but not limited to Reaches 1, 2 and 4 may cause or contribute to exceedances in these impaired reaches. If the Regional Board holds that the other reaches in the Santa Clara River are meeting water quality standards, then there is no reason not to assign WLAs to the other reaches as well. By assigning WLAs to all reaches, there will be greater confidence that final WLAs in impaired reaches will be attained. At a minimum, the Regional Board should require routine monitoring of the reaches not covered in the Draft TMDL to confirm that water quality standards are met and understand if they are contributing to exceedances.	By listing all the cities, it was staff's intention that the WLAs apply to reaches that drain to impaired reaches. Staff will clarify in the staff report and BPA that sources that discharge to Reaches 1 and 2 will have LAs and WLAs based on allowable exceedance days for the Estuary, and sources that discharge to Reach 3 or above will have LAs and WLAs based on allowable exceedance days for Reaches 3, 5, 6, and 7.

Number	Comment	Response
5.2	**The Regional Board should specify Interim WLAs within the TMDL** The Draft TMDL's Implementation Schedule suggests that the responsible party-developed Implementation Plan should include "proposed milestones." Assigning this responsibility to a discharger is inappropriate. Regulatory responsibility under the TMDL is the Regional Board's responsibility and cannot be delegated to the regulated community. We urge the Regional Board to include compliance milestones or interim WLAs in the TMDL. Enforceable, interim milestones are important to ensure that dischargers are on track for meeting WLAs. Of note, the Draft Los Angeles River Bacteria TMDL includes Interim WLAs. Specifically, we suggest including an interim WLA for wet weather compliance at year 7. This could consist of an allowable number of exceedance days in between background and final WLAs or higher bacteria standards (in density) than the numeric target. For example, a 50% reduction in exceedance days and/or geometric mean bacterial density makes more sense as an interim target. We urge the Regional Board to modify the Draft TMDL accordingly.	The proposed TMDL has been modified to include interim in-stream allocations based on the historical exceedance probability of single sample bacteria objectives at the existing monitoring locations to ensure no degradation of water quality. Additionally, language has been added to the Basin Plan amendment specifying that the proposed milestones in the MS4 permittees' implementation plan will be considered by the Regional Board as permit conditions when the MS4 is reopened or reissued. The implementation schedule has also been revised to include a requirement that MS4 permittees provide a verbal update to the Regional Board on TMDL implementation progress.
5.3	**The Santa Clara River Dry Weather Compliance Deadline should be less than 8 years.** The Draft TMDL requires dry weather compliance within 8 years after the effective date of the TMDL. Instead, we believe that the dry weather compliance deadline for the Santa Clara Estuary and Reaches	Staff is proposing an 8-year dry-weather implementation schedule in response to responsible parties' concerns about the time needed to plan, design, and construct dry weather treatment facilities and BMPs. One city planner who attended the TMDL CEQA scoping meeting stated the need for a 10- to 15-year dry-weather implementation schedule. Staff believes that 8 years is

Number	Comment	Response
	should not exceed 6 years for dry weather. The bacteria TMDL for Ballona Creek, a far more urbanized and polluted watershed, has a dry weather compliance deadline of 6 years, which should be attainable for final bacteria compliance throughout the Santa Clara River and Estuary. As you know, the dry weather period is when we see the greatest numbers of recreational users in the River, and thus, the greatest public health risk from contacting polluted water. Dry weather runoff is also relatively easier to control and should already be controlled under current municipal MS4 permit provisions. Of note, the 2000 Ventura County Municipal Storm Water permit included requirements for Receiving Water Limitation exceedances and implementation of control measures to reduce pollutants in the discharge. The requirements state that, "*permittees shall effectively prohibit non-storm water discharges into the MS4 (storm drain systems) and watercourses…and any violation of this order constitutes a violation of the Clean Water Act..and is ground for enforcement action."* Since [non]storm water discharges have been illegal for over a decade, the Regional Board should expedite the schedule and be consistent with the Ballona Creek TMDL.	the shortest practicable schedule, given the distribution of urban areas in the watershed and the other various nonpoint sources in the watershed that must be controlled.
5.4	**The Number of Compliance Monitoring Locations should be increased within each Reach.** According to **page 5 of the TMDL**, "*a minimum of at least one sampling station will be located in each impaired reach*." One sampling station per reach is too low, and should be increased to at least 3	The proposed TMDL has been modified to include outfall monitoring. Outfall monitoring will allow responsible parties to better identify problem areas and determine compliance with waste load and load allocations. In addition, the monitoring requirements specified in the TMDL are minimum requirements. Responsible jurisdictions and agencies for the MS4 WLAs must

Number	Comment	Response
	sampling sites within each reach (upstream, middle, and downstream). Reaches within the Santa Clara River are miles long. One monitoring location per reach will not provide a complete picture of water quality in the River. By increasing the number of monitoring locations per reach, stakeholders will be better able to identify problem areas and determine if water quality standards are being attained. Additionally, storm drain outlets should be monitored for compliance purposes. According to a recent court ruling regarding MS4 dischargers' storm drains, (Natural Resources Defense Council (NRDC), Inc., *et al.* and the County of Los Angeles *et al.*) "*Standards exceeding pollutants must have passed through a County or District outflow in order to constitute a discharge under the Clean Water Act and the Permit*." Extrapolating this ruling to the Draft TMDL, it is critical to have additional outfall monitoring to be able to verify that there is, in fact, a discharge. This is important to identify responsible parties that cause or contribute exceedances of water quality standards.	submit a comprehensive in-stream bacteria water quality monitoring plan for approval by the Executive Officer. The Executive Officer can increase the monitoring requirements, if needed, when he or she approves the plan, or at any time.
5.5	**Additional Details Should be Provided on the Reference System** Page 52 of the staff report discusses how percentages of exceedance probability days for freshwater (Reaches 3, 5, 6, and 7) were based on Southern California Coastal Water Research Program's (SCCWRP) study focusing on single sample *E. coli* Exceedance Probabilities for dry and wet weather and the Estuary calculation was based on the San Onofre State Beach and San Mateo	The SCCWRP reports cited in the staff report all provided monitoring locations for the sampling sites. The staff report has been revised to include the underlying data for the freshwater reference system studies as an appendix. Regional Board staff has requested the underlying data for the beach reference system studies from SCCWRP. Staff will provide the underlying data used for the beach reference conditions as an appendix once data are available.

Number	Comment	Response
	Beach analysis in another SCCWRP study. However, data was not available in the staff report or in the published SCCWRP study. Critical details such as exact monitoring locations were left out, which makes it difficult to confirm the validity of the exceedance probabilities for fresh water. We ask that staff provide this information and additional details on the analysis.	
5.6	**The Regional Board should Consider Impacts from a POTW's Nutrient Discharge on Bacteria Regrowth** The Draft TMDL appropriately assigns a WLA of zero allowable exceedance days to POTWs including the Saugus water reclamation plant, Santa Paula water reclamation facility and Ventura water reclamation facility. However the Draft TMDL and accompanying staff report do not discuss how nutrient discharges from POTWs could contribute to increased bacteria regrowth in the impaired reaches. For instance, the Ventura water reclamation facility has discharged high levels of nutrients for many years and NDN facilities have yet to be completed. This discharge may have contributed to bacterial regrowth in the Estuary. Thus, the Regional Board should also account for this potential source from POTWs in the Draft TDML. Also, the Board should consider how variable discharge volumes and nutrient concentrations can impact bacterial densities in the lagoon over the implementation schedule for the TMDL.	As was done for previous bacteria TMDLs adopted in the region, the proposed TMDL focuses on the pollutants listed on the 303(d) list and the direct correlation between bacteria loading from sources in the watershed and bacteria concentrations in the receiving water. There are many factors, including temperature, pH, nutrient availability, and competition, which could affect bacteria re-growth in the receiving water. Staff considered these factors through the use of a reference system approach in the proposed TMDL. Staff can consider the possible correlation between discharge volumes and bacterial densities in the Estuary if the TMDL is reconsidered at Year 4.

Number	Comment	Response
City of Santa Clarita		
6.1	**Inadequacy of Data for Linkage** There is a demonstrated correlation between sediment loads and FIB. On page 56 of SCCWRP Technical Report 510, it states there is a significant correlation between total suspended solids and fecal indicator bacteria. "A simple Spearman's correlation matrix (Table 5-1) of [Total Suspended Solids] (TSS), stream flow and FIB indicates that E. *coli* was significantly positively correlated ($p < 0.0001$) with TSS from agricultural, recreational and open LU [land use] sites." However, **no discussion of the correlation between TSS and FIB is in the draft FIB TMDL, even though the Technical Report 510 is referenced.** Enclosed is a California Coastal Commission funded study by Stillwater Sciences, finalized in 2007, on sediment and geomorphology of the Santa Clara River. This study demonstrates that the natural sediment load is extraordinarily high in the Santa Clara River. Changes in geomorphic process started occurring prior to California becoming a state (c. 1820). There have been increases in sediment load due to grazing and gravel mining and reductions in sediment loading as a result of the two darns in the watershed. The study states "Sediment supply rates to the lower Santa Clara River are high as a consequence of geological and climatic factors, but are also conditioned by significant episodic events such. as landslides, earthquakes and fires." There is a significant impact to FIB growth that is central to the discussion and unique to the Santa Clara River	The commentor's assertion that recent scientific studies eliminated drainage areas that have burned within the last three years mostly because burned areas have higher levels of indicator bacteria is not true. Technical Report 542 excluded areas that had been burned in the last three years to ensure that sampling would capture natural conditions without influence from any land-based anthropogenic input. The report states that although fire can be a natural occurrence, inclusion of sites in burned catchments would have added a confounding factor and, therefore, were excluded. Technical Report No. 542 also cites SCCWRP Technical Report No. 500, which elaborates on the exclusion of burned catchments as a criterion. According to Report 500, sites should not be in watersheds that have burned during the previous three years to limit the number of variables that affect water quality because erosion following fire can produce major changes in stream morphology and composition. Further, fire induced landslides and siltation eliminated pools and runs and altered habitats. Neither Technical Report 542, nor Technical Report 500 mention higher levels of bacteria at burned sites. Staff disagrees that TSS loading in the Santa Clara River watershed is necessarily correlated with bacteria loading. While SCCWRP Report No. 510 shows a correlation between TSS and bacteria from the open space sites, the sites in that study were not located in the Santa Clara River watershed. SCCWRP Report 500, which included sampling sites in the Santa Clara River watershed, showed no correlation between TSS and bacteria loading. For example, Sespe Creek has high flux of total suspended solids (4059 kg/year km^2), but results of all samples did not exceed single sample bacteria water quality objectives.

Number	Comment	Response
	that has not been analyzed in any way. This is critical information that is needed to adequately address whether or not beneficial uses are impaired, as much of the FIB loads could be background conditions. There is no discussion in the TMDL with regard to fire or impacts of areas in the watershed that have been subjected to fires. Throughout history, there have been significant fire natural disasters in the Santa Clara River watershed on a regular basis. Several scientific studies on FIB have eliminated drainage areas that have burned within three years due to impacts on results, mostly higher levels of FIB. For example; SCCRWP Technical Report 542 eliminated areas that had burned in the three previous years and stated that the inclusion of burned areas would add a confounding factor and were therefore eliminated. As previously stated in this document, there is a correlation between TSS and FIB. City staff discussed the exclusion of burn areas at the Regional Board held public meetings. However, the TMDL does not address this issue. The draft FIB TMDL is silent on the correlation between fires, TSS, and FIB in the analysis. This is critical to the discussion of FIB sources to properly assign exceedance days, load allocations, and waste load allocations.	Technical Report 500 specifies several potential reasons for this discrepancy: “First, natural areas may intrinsically produce less pollutant washoff (i.e., less source material). Second, the particle size distribution, and hence the affinity between pollutants and particles, may differ between natural and developed areas. Third, pollutant partitioning to various particle size fractions may be different between natural and developed sites. The results of this study strongly suggest the first reason (i.e., less source material) contributes to lower loads. However, differences in the nature of the particle sizes and the associated pollutant partitioning remain to be investigated. This information would provide additional insight into the contribution of natural areas to downstream transport and deposition patterns.”
6.2	The upper Santa Clara River watershed has a significant number of horse related land uses. SCCWRP Technical Report 510 states,	The area of horse and livestock related land uses in the draft staff report were obtained from 2005 Southern California Association of Governments land use data. Based on discussion

Number	Comment	Response
	"Recreational (horse) [land use] LU had the greatest mean TSS [event mean concentrations] EMC compared to all other LU sites." The report also found that horse properties discharge more bacteria than primary sewage treatment plants based on the technical reports referenced. It is stated in the draft FIB TMDL that "In the Santa Clara River watershed, there are about 2.2 acres of horse ranches in Los Angeles' County and 0.3 acre in Ventura County. About 0.1 acre dairy/intensive livestock is located in the Santa Clara River Watershed." These noted acreages are extremely inaccurate. Based on the City Geographic Information System mapping, there are approximately 10,255 acres of equestrian property. This is demonstrated on the attached map. Also, from the Los Angeles/Ventura county line to Chiquito Canyon Road, there is approximately three miles of cattle grazing land with direct access to the river. There are a minimum of ten commercial horse stables in the Los Angeles County area of the watershed, which does not include sheep and other grazing animals. Better information is needed for horse/livestock acreages as this affects load allocations. **The horse and livestock acreages are grossly understated and need to be updated with accurate information and reanalyzed.**	with City of Santa Clarita staff, the difference between the areas reported in the staff report and the areas reported by the City in the comment letter is due to the fact that the areas reported by the City include low density residential parcels that are zoned to allow for horses. The draft staff report has been revised to explain that the areas reported for horse ranches do not include low density residential areas and that there are horse-impacted land uses associated with low density residential areas. Regardless of the areas of horse and livestock land uses, the TMDL assigns load allocations to horse and livestock activities. The load allocations are equal to an allowable number of exceedance days of the concentration-based objectives. Thus, the area of the land use does not affect the calculation of the load allocations for horses and livestock.
6.3	It is not probable that wild lands are not contributing to the high bacteria loads when over 90 percent of the watershed is open space and 80 percent of that is wild lands. Of the limited amount reference reach data in the watershed; there are results as high as 52	The highest concentration of 52 MPN/100 ml for *E. coli* from the natural landscape sites in the watershed is below the *E. coli* freshwater geometric mean objective of 126 MPN/100 ml and this was during dry weather.

Number	Comment	Response
	mpn/100 ml, more than 20 percent of the standard. In addition, the data used did not use specific dates, but quarters. As a result, it is impossible to know if these were wet weather or dry weather conditions. The TMDL process is to be watershed, not regionally, based and should be reassessed based on local conditions and better reference data. While the City appreciates the reference reach approach, once TMDLs are approved, the limited information becomes a statement of fact rather than an assumption of the only data available at the time.	Wet- and dry-weather data from the natural landscape sites (Piru Creek and Sespe Creek) can be obtained from Tables 3 and 4 of SCCWRP Technical Report 500. The staff report has been modified to explain that the study included dry-weather samples from both sites and one wet-weather sample from Sespe Creek.
6.4	The Regional Board has initiated enforcement actions on cities in the Malibu Creek watershed that demonstrated their immediate receiving waters were not in exceedance of the standard in their reach, but assumed to contribute to a violation miles away despite evidence submitted proving otherwise (see attached letter to the City of Calabasas). Since it is the position of the Regional Board enforcement that all potential loads contribute whether or not they are exceeding the standard or not, it seems imperative to understand precisely what levels in reference conditions occur and deal with cumulative affect, not a regional assumption for all of Southern California. The waste loads for storm drains should not be affected by the loads from reference conditions in determining compliance. However, this is an assumption made in the draft FIB TMDL with the language as currently drafted. The statement that reference conditions do not exceed FIB standards is inaccurate, especially when the sediment loading has been completely	Staff agrees that there are natural sources of bacteria, which may cause or contribute to exceedances of the single sample objectives for bacteria indicators. This is why the proposed TMDL is based on a reference system approach. If the Regional Board determines that an exceedance did not result from discharges from the MS4, then the MS4 permittees would not be responsible for violations of the WLAs. A permittee would not be responsible for violations if the Executive Officer determined that the permittee had adequately documented through a source investigation of the subwatershed, pursuant to protocols established under Cal. Water Code 13178, that the bacterial sources originating within the jurisdiction of the permittee had not caused or contributed to the exceedance. The NOV to the City of Calabasas cited by the commentor included a CWC § 13383 Order which allowed Calabasas the opportunity to demonstrate the cause of the receiving water limitation violations. However, the technical report submitted by Calabasas did not meet the requirements of the Order.

Number	Comment	Response
	ignored and the reference conditions in the Santa Clara River watershed are poorly understood. **The City respectfully requests a rewriting and analyzing of this topic to explain there are limited data sets and that much more information needs to be analyzed before assumptions can be made on the background conditions of the Santa Clara River.**	Specifically, the report provided no data demonstrating that the City did not contribute to the receiving water limitation violations and no evidence that bacteria were from other sources other than statements that the City is located 11 miles upstream of the receiving water and that there was low rainfall during the dry-weather monitoring period. The TMDL does not say that reference conditions do not exceed bacteria objectives. In fact, the TMDL says that the reference system exceeds bacteria objectives 16 days a year during wet weather and 5 days a year during dry weather and assigns allocations accordingly. The Regional Board has contributed funding and resources to the development of reference system studies and acknowledges the importance of an appropriate reference system. The allowable number of exceedance days for the freshwater reference system are based on numerous freshwater reference sites throughout Southern California. Staff believes the resulting number of allowable exceedance days based on numerous reference systems is representative of the natural conditions in the Santa Clara River watershed. Nonetheless, staff proposes revisions to the TMDL to include a reconsideration if voluntary studies are performed to determine a local reference system.
6.5	The Wishtoyo land use study referenced in the staff report is inappropriately small, with only three limited sites in Ventura County to apply to the entire Santa Clara River. There was no discussion of the rural nature of drainage areas located in almost half of the Fillmore site that are on septic tanks and have large, confined animals. Please do not utilize this data to	The data obtained from the Wishtoyo study are valid data, which are combined with other data and studies to determine typical bacteria loadings from various land uses. Two of the three Wishtoyo land use sites drain areas greater than 90% urban. The staff report clearly acknowledges that the Fillmore site drains a 58% urban area. The information, when combined with all of the data and analysis presented in the staff report is adequate to

Number	Comment	Response
	demonstrate the contribution of storm drains in the Santa Clara River. The information is scientifically inappropriate due to the inaccurate land use analysis and limited number and type of samples, as the land use was poorly described and did not include other confounding factors like TSS and rainfall.	assess the various bacteria sources in the Santa Clara River watershed.
6.6	The Sanitation District monitoring site RA, located above Bouquet Canyon Road has limited numbers of samples (30) when compared to RB (243) available because of lack of flow. The City interprets this as little to no dry weather flow in the upstream reaches, even if the Sanitation District discharge does provide some dilution in wet weather. The samples demonstrate that other flows, such as urban runoff and storm drains, simply do not flow downstream to affect any beneficial use during a dry condition. This would also indicate that there is not enough water to have contact with. During wet weather conditions are the only times RA has sufficient flow for sampling. Those sample results exceed the standard very few times. Assuming all urban areas equally discharge FIB at all times throughout Southern California or Los Angeles County is inappropriate for a TMDL. **A TMDL is supposed to be based on actual watershed information, not based on regional assumptions.**	Results from both RA and mass emission station S29 indicate that Reach 6 is still impaired by coliform bacteria. The numbers of exceedance days at both RA and S29 reach the minimum number of exceedances required for listing on the Section 303(d) list of impaired waters. Of the 30 samples collected at RA, there are 28 dry-weather samples and 2 wet-weather samples. These data show that the river does have flow in dry weather.
6.7	The FIB TMDL staff report should also include specific numbers for all data referenced, not only pass or fail, for the benefit of their Board and the public trying to understand this issue. Please provide scientific data	The data review and source assessment sections of the staff report include concise tabular summaries of data and a description of the data in the text. Staff also provided stakeholders with complete data files when requested. To include all the specific data would make the staff report too long

Number	Comment	Response
	to support the following:	and un-readable. Data will be included in the administrative record for the TMDL.
	- The contribution of water supplies to FIB as it is being transported through the Santa Clara River and its tributaries	-It is not clear to which section of the staff report this comment is referring.
	- Fertilizers from lawns result in higher bacteria loads	-The contribution of fertilizers is generally discussed as a possible source of increased bacteria loads on page 37 of the staff report. Increased nutrients can increase bacteria growth.
	- The assumption that most fecal coliform is e. coli	-The assumption that most fecal coliform is *E. coli* is a conservative assumption made in order to compare data from different sources and is clearly stated in the staff report.
	- Why the economic analysis uses cisterns at public facilities when that Best Management Practice (BMP) does not treat FIB and public facilities were not analyzed as a land use that contributes to FIB	-The Regional Board cannot prescribe the manner of compliance, but must analyze the costs of a reasonable range of implementation alternatives. There are public facilities within the MS4 system and it is reasonable to assume that the land for these facilities could be used to treat stormwater.
	- How the Regional Board intends to address septic tanks when the enforcement staff cannot provide data about them and it appears that implementation of regulating septic tanks by the Regional Board has not occurred to date.	-The Regional Board is currently regulating septic systems by issuing WDRs to commercial systems and issuing waivers to residential septic systems conditioned upon regulation by local agencies as agreed to in memoranda of understanding between the Regional Board and local agencies.
6.8	The FIB TMDL fails to adequately address major data analysis and linkage analysis issues. They all directly affect waste load allocations and number of exceedance days. The analysis has only collected data quickly to comply with an artificially urgent legal,	The proposed TMDL is supported by science and the source assessment and linkage analysis justify the assignment of waste load allocations to discharges from the MS4. While there is no outfall monitoring data, land use-specific stormwater monitoring data collected in Reaches 1 and 2 as well as other technical

Number	Comment	Response
	not scientific, timeline. The City questions the quality assurance and study design of some of the data used. A TMDL is supposed to be a, watershed analysis, not an administrative expedient document. Much greater effort for data analysis must be allowed before approving any waste load allocation to determine where any impairment might be coming from. **There are linkage assumptions in the analysis that are simply incorrect which will lead to compliance mechanisms and enforcement actions that result in projects that ultimately will not solve any of the problems outlined in the FIB TMDL.**	studies in the greater Los Angeles region support the conclusion that discharges from the MS4 to the river are contributing to bacteria exceedances at mass emission stations. Additionally, local natural landscape monitoring shows no exceedances of bacteria objectives in natural areas (see response to comment 4.6). This cumulative evidence leads to the conclusion that MS4 discharges are a source of bacteria to the river. Therefore, the TMDL assigns waste load allocations to MS4 dischargers, as required. The TMDL also recognizes the potential contribution from other point sources and nonpoint sources in the watershed and assigns waste load and load allocations to these sources as well. However, to address the perception that the TMDL assigns more responsibility to the MS4 dischargers, the proposed TMDL has been modified to revise some of the language in the source analysis. In addition, MS4 outfall monitoring has been added to determine compliance with the waste load allocations assigned to the MS4 Permittees.
6.9	**Use Attainability Analysis for High Flow Exemption for Recreation Beneficial Use** The City requests a high flow exemption for the Santa Clara River through the Use Attainability Analysis process where the contact and non-contact recreation standards are temporarily lifted during high flow conditions as river recreation is a life safety risk. The Regional Board approved a high flow exemption policy in 2003. Natural areas have dangerous flows as well but were excluded from the policy. The enclosed article from the Ventura County Star clearly	Staff already evaluated the extension of the high flow suspension of the REC-1 use and associated bacteria objectives to a broader array of channels and time periods when developing the "Amendment to Suspend Recreational Beneficial Uses in Engineered Channels during Unsafe Wet Weather Conditions," Final Resolution and Amendments (as adopted on July 10, 2003). Staff determined that a high flow suspension was only appropriate under certain conditions. Using available information, staff identified those water body segments that for their entire length meet the definition of an engineered flood control channel. Engineered channels are defined as inland, flowing surface

Number	Comment	Response
	demonstrates the unsafe conditions in the watershed during high flow events. The Los Angeles County Fire Department Swiftwater Staffing Guide (enclosed) also shows the Santa Clara River becomes dangerous at Level II when 1.5 inches of rain in 24 hours falls on unsaturated ground, or when one inch of rain falls in 24 hours on saturated ground. The Regional Board policy from 2003 states the law allows removal of a beneficial use when "Natural, ephemeral, intermittent or low flow conditions, or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met". This is the case with the Santa Clara River. Dangerous flow conditions have occurred on the Santa Clara River throughout history, even before California became a state. **Please allow a high flow exemption consistent with the Los Angeles County Fire Department response guidelines as completed previously in 2003 for other areas in the region.** In addition, it is important to note that the City is required to prohibit contact with the Santa Clara River by California Department of Fish and Game (CDFG) through Streambed Alteration Agreements due to potential and actual harm to endangered species, such as fairy shrimp and threespined unarmored stickleback, especially during the dry season. Pursuant to the CDFG, if the City allows contact with the water, it is in violation of California Fish and Game law. Attached are Streambed Alteration Agreements	water bodies with a box, V-shaped or trapezoidal configuration that have been lined on the sides and/or bottom with concrete. Channelization of waterbodies or waterbody segments in the Los Angeles Region was carried out for the express purpose of conveying storm flows as quickly as possible to the ocean. This, among other considerations, was the premise for the suspension of the recreational uses in engineered channels during storm events that resulted in “swiftwater conditions.” The Regional Board considered and rejected applying this suspension to natural channels during the development of the High Flow Suspension amendment to the Basin Plan. As necessary data become available, staff intends to develop a similar amendment for engineered channels in Ventura County. If and when such an amendment is adopted, the Regional Board may reconsider the TMDL to make any necessary revisions in light of a high flow suspension of the recreational beneficial uses. The streambed alteration agreements provided by the commentor contain reasonable BMPs to protect endangered species during trash pickup and Arrundo removal events. These BMP's are agreed upon by DFG and the party proposing the project as conditions that will lower project impacts to a level below significance. DFG Streambed alteration agreements are agreed upon and negotiated by both parties. These agreements do not constitute a prohibition of the recreational use of the river. DFG law does not prohibit these activities but rather it is a condition of the agreement, which is based on specific project information and project specific impacts. Prohibition of contact with water in general is not a general condition that DFG enforces or is described in any details in the DFG Code book.

Number	Comment	Response
	issued to the City for the annual River Rally river clean-up event and a river restoration project that demonstrate this fact. **Therefore, contact recreation in the Santa Clara River at all times is not an accurately designated beneficial use and should be modified to reflect current law and conditions. Contact recreation is not the most sensitive beneficial use at all times in the Santa Clara River.**	Furthermore, the Basin Plan contains many instances where a waterbody is designated for both (1) recreational beneficial uses and (2) rare, threatened, or endangered species beneficial uses. The two beneficial use designations are not contradictory and both uses must be protected. Finally, a use attainability analysis must be conducted before a use can be removed, and such an analysis has not been undertaken.
6.10	**Fires.** As stated previously, there is no discussion in the TMDL with regard to fire or the impacts of areas of the watershed that have been subjected to fires. City staff brought up the discussion at all the Regional Board public meetings held and handed studies to Regional Board staff on December 9, 2009, both meetings on February 25, 2010, and both meetings on March 2, 2010. Consistently over the last several years, there have been significant fire natural disasters in the Santa Clara River Watershed at least annually. As stated previously, SCCWRP Technical Report 542 eliminated areas that had burned in the three previous years and stated that the inclusion of burned areas would add a confounding factor and were therefore eliminated. As previously stated in this document, there is a strong correlation between TSS and FIB. The TMDL is silent on this issue and it has major implications on background water quality in the Santa Clara River watershed. **The City requests a contact recreation exemption for drainage areas that have been subject to wildfires in the previous three years.**	See response to Comment No. 6.1. While fires can cause increased runoff and sediment erosion, staff is unaware of studies on increased bacteria loads after fires. The most common constituents associated with burned areas are nutrients, metals, and organic pollutants such as PAHs and dioxins. While wildfires naturally occur in forests in the region, human activities have increased the frequency and intensity of fires. Therefore, areas subject to fires cannot be considered as reference sites.

Number	Comment	Response
6.11	**Reopeners** As previously noted in this document, there is a lack of adequate data, or with regards to the impact of fires, and no data to support many of the conclusions ascertained in this TMDL. If it is adopted despite the City's concerns, there is no opportunity indicated for reopeners for the submittal of additional data for more adequate information to address reference conditions, burn areas and impacts of fire, or for high flow exemptions. **Please include periods of reopeners for the submission of additional data for fires, high flow exemptions, background study, land use study, and high natural TSS/FIB correlation.**	The proposed TMDL has been modified to incorporate reconsideration four years after the effective date of the TMDL if monitoring and any voluntary local reference system studies justify a revision.
6.12	The TMDL states that the Santa Clara River Estuary is closed by a berm which forms at the mouth in low flow conditions. It also states that the berm is breached by storm water flows and/or wave over-washing. There is a hydrologic dry gap in Reach 4 between the upper and lower Santa Clara River. This prevents any surface flow directly connecting downstream of Reach 4 during dry weather and most of the time during wet weather. The Freeman Diversion in Saticoy diverts most of the surface flow from the Santa Clara River and natural groundwater recharge occurs in the Oxnard Forebay Basin downstream of the Freeman Diversion in the Santa Clara River. The downstream flow generally decreases between the diversion and the Highway 101 Bridge as river water percolates into the river bed. Santa Clarita's storm drain discharge, nor any storm drain discharge, does not contribute to the berm breaches during low and medium flow conditions. Only during natural rainfall	The information requested has already been provided in the staff report. Staff will clarify in the staff report and BPA that sources that discharge to Reaches 1 and 2 will have LAs and WLAs based on allowable exceedance days for the Estuary, and sources that discharge to Reach 3 or above will have LAs and WLAs based on allowable exceedance days for Reaches 3, 5, 6, and 7.

Number	Comment	Response
	events would the berm breach. Please revise the draft FIB TMDL to more accurately describe the hydrology of the Santa Clara River.	
6.13	In referencing the current effective Municipal Separate Storm Sewer System (MS4) permit within Los Angeles and Ventura Counties, the TMDL states the Los Angeles County MS4 permit was amended in December 2009, and is on a five-year renewal cycle. The permit was amended in 2009, and not adopted. The current Los Angeles MS4 permit was adopted in December 2001, and is on a five-year renewal cycle which ended in December of 2006. The current permit is four years overdue. The Ventura County permit was also overdue at the time of its adoption in May 2009. Please describe the current MS4 NPDES Permit situation in this region more accurately in the draft FIB TMDL to provide a factual description of the current MS4 permitting process in this region.	The staff report correctly references the MS4 permitting process in the region. No change is necessary.
6.14	Based on comparison to the Ballona Creek Bacteria TMDL, this TMDL estimates it would take approximately 11,000 cisterns installed on schools and public facilities in the Santa Clara River Watershed to manage the flow from these facilities. Cisterns do not treat FIB, and may actually contribute to FIB growth. Please note that cities and counties have no jurisdiction over school districts and cannot mandate any type of best management practice to control any discharge from their property. School districts are regulated by the state. Please clarify in the draft FIB TMDL documents what mechanisms the state would have to require school districts to	The Regional Board is prohibited from prescribing the manner of compliance with the TMDL, but must analyze the costs of implementing the TMDL based on a reasonable range of implementation alternatives. Staff agrees that cisterns do not treat bacteria, but they are used to reduce runoff and peak flows in order to control bacteria loading associated with storm water. Water stored in the cisterns can be reused for irrigation, which reduces the amount of storm water discharged to surface waters. There are schools within the MS4 system and it is reasonable to assume that the land for these facilities could be used to treat stormwater through cooperative agreements. The staff report does not assume that cities and counties would be required to mandate BMPs on school properties.

Number	Comment	Response
	implement best management practices to control FIB if they are a contributing land use.	
6.15	The amount of golf courses contained within the Santa Clara River watershed is inaccurate. The TMDL states there are nine golf courses in the Santa Clarita Valley. There are only four. Two are stated for Santa Paula and there is only one. Six are stated in Oxnard and there is only one. Please include an accurate count of golf courses in the Santa Clara River watershed.	Staff obtained numbers of golf courses contained within the Santa Clara River watershed by searching on Google Maps. Staff will update this information if stakeholders provide additional data and the referenced source. Please note that the number of estimated golf courses does not impact the assignment of load allocations to these sources.
6.16	**Watershed Based Compliance Liability** The TMDL states "The cities of Santa Clarita, Fillmore, Santa Paula, and Ventura, the Counties of Los Angeles and Ventura, and the Los Angeles County Flood Control District and Ventura County Watershed Protection District are jointly responsible for meeting the WLAs assigned to MS4 discharges. The cities and the counties may jointly decide how to achieve the necessary reductions in exceedance days at each compliance point by employing one or more of the implementation strategies discussed below or any other viable strategy." Many of the cited jurisdictions are downstream of Santa Clarita, and the City has absolutely no control what other cities or the counties of Los Angeles and Ventura discharge into the Santa Clara River. The City fully expects to coordinate and work with other cities, as is standard for all watershed and water quality related efforts. However, the City cannot be responsible for the discharger actions outside City limits and requests separate TMDLs for each reach or other modification to ensure that the City only has requirements for	Unless the dischargers can demonstrate their discharges did not contribute to the exceedances coming from the outfall, MS4 discharges are jointly and severally liable for discharges from the common storm drain system. The City of Santa Clarita would not be responsible for discharges downstream of the City, but it would be jointly and severally liable for its discharges, which may be commingled with upstream discharges (i.e., the County of Los Angeles), before the MS4 system ultimately discharges to the Santa Clara River. The inter-connected nature of the storm drain system makes it difficult to determine exactly where pollutants originated within the MS4. In such an integrated system, one or more permittees may have caused or contributed to exceedances. This joint and several liability is consistent with the law. The Clean Water Act, recognizing that permittees may seek permits based on system-wide, not jurisdiction-by-jurisdiction, discharges, imposes additional roles and responsibilities upon those permittees. By accepting this type of permit, the permittees implicitly agree to accept the responsibilities necessary to control and reduce the discharge of pollutants in commingled discharges [40 C.F.R.1 sections 22.26(d)(2)(iv), (d)(2)(vii), (d)(2)(i)(D),and

Number	Comment	Response
	discharges over which they have jurisdiction.	(d)(2)(iv)(B)(3).] See also response to Comment No. 6.4, paragraph 2.
6.17	**Poor Linkage** The TMDL states the average bacteria loads from the Saugus and Valencia WRPs and then compares these numbers to mass emissions data collected at mass emissions site S-29 based on storm events. The conclusion was drawn that "Data from storm drains and channels draining urban areas show elevated levels of bacteria, indicating that urban areas are a source. A calculation of bacteria loadings in the Santa Clara River shows that average annual loadings from WRPs are significantly less than wet-weather loadings and that most of the annual bacteria loading to the Santa Clara River is associated with wet weather. Based on this information, staff concludes that runoff from urban areas served by the storm drain system is most likely the largest source of bacteria." As discussed in-this comment letter, there is insufficient end of pipe monitoring data in Ventura County and no end of pipe monitoring is Los Angeles County to make the conclusion that the source of most FIB in the Santa Clara River is the storm drain system. The fact that the mass emissions station is located downstream of the Valencia and Saugus WRPs demonstrates there is inadequate data to substantiate the linkage between the increased levels during a storm event and the bacteria levels in the output of the storm drain systems as a contributing source. An additional statement concluded that "Limited data from natural landscapes in the watershed. indicate that open	Staff agrees that there may be a variety of sources contributing to exceedances of bacteria objectives at the mass emission station. While there are no outfall monitoring data, land use-specific stormwater monitoring data collected in Reaches 1 and 2 as well as other technical studies in the greater Los Angeles region support the conclusion that MS4 discharges to the river are contributing to bacteria exceedances at mass emission stations. Additionally, local natural landscape monitoring shows no exceedances of bacteria objectives in natural areas. This cumulative evidence strongly suggests that discharges from the MS4 are a source of bacteria. Therefore, the TMDL assigns waste load allocations to these discharges accordingly. The TMDL also recognizes the potential contribution from other point sources and nonpoint sources in the watershed and assigns waste load and load allocations to these sources as well. All nonpoint sources are assigned load allocations based on the same allowable number of exceedance days of the concentration-based targets as allocated to the MS4 discharges. However, to address the perception that the TMDL assigns more responsibility to the MS4 Permittees, the proposed TMDL has been modified to revise some of the language in the source analysis. In addition, MS4 outfall monitoring has been added to determine compliance with waste load allocations assigned to MS4 Permittees.

Number	Comment	Response
	space loading is not likely a source of bacteria." As noted in this document, 90.5 percent of the Santa Clara River watershed is open space and over 80 percent of the lands are wildlands. The draft FIB TMDL makes no attempt to discuss the TSS/FIB correlation. **There is insufficient data from the Santa Clara River watershed to conclude that wildlands, TSS and other land uses, are not a significant contributor of FIB in the river.**	
6.18	**Delay for More Study and Environmental Protection Agency (EPA) Renegotiation** While the City appreciates the efforts made by Regional Board staff, it is clear from reading the draft FIB TMDL that there is not enough evidence to link sources with receiving water data. It is not possible to adequately deal with FIB until such linkages are better understood. It has been demonstrated time and time again that once these documents are approved, they are nearly impossible to alter, even when the best science is presented. The waste load allocations and analysis are based on readily available information and regional assumptions, not accurate information about the Santa Clara River watershed. It has been clear from Regional Board staff presentations that the settlement agreement between the EPA and the environmental community is driving the unrealistic timeline, and not science. Without the science to adequately link the sources of the bacteria to any particular discharge type in the Santa Clara River, the draft FIB TMDL does not adequately address the FIB water quality issue and the City respectfully request it be revised before it is moved forward.	At the June 3, 2010 Regional Board meeting, the Director of EPA Region IX Water Division stated that EPA would not negotiate any additional changes to the consent decree beyond what they had already agreed to with NRDC, Heal the Bay, and Santa Monica Baykeeper (plaintiffs) in the consent decree revision noticed on April 12, 2010.

Number	Comment	Response
City of Santa Paula		
7.1	The City of Santa Paula has recently experienced several key staff changes. As a result, we have not been able to do a full independent review of the draft Santa Clara River Fecal Indicator Bacteria TMDL. However, discussions with the City of Fillmore have shown that their issues are the same as Santa Paula's. We therefore add our endorsement to Fillmore's response dated June 4, 2010.	Comment noted. See responses to comment Nos. 1.1 to 1.4.
Resource Conservation District Ventura County		
8.1	We are writing to express our concern about the draft FIB TMDL. As a member of the various watershed stakeholder groups (Santa Clara River, Calleguas Creek and Ventura River) in the area we believe more time is needed for this effort. In addition we are working closely with Ag producers in the region to implement BMPs that relate to this issue and others. We appreciate the efforts made by you and your staff on this critical issue. Our concern is however that there is not enough evidence to support the draft FIB TMDL. Linking sources with water data is not supported by the draft. Shouldn't the linkages be fully understood to adequately deal with FIB TMDL?	The proposed TMDL is supported by science and the source assessment and linkage analysis justify the assignment of waste load allocations to discharges from the MS4. While there are no outfall monitoring data, land use-specific stormwater monitoring data collected in Reaches 1 and 2 as well as other technical studies in the greater Los Angeles region support the conclusion that discharges from the MS4 to the river are contributing to bacteria exceedances at mass emission stations. Additionally, local natural landscape monitoring shows no exceedances of bacteria objectives in natural areas (see response to comment 4.6). This cumulative evidence leads to the conclusion that MS4 discharges are a source of bacteria to the river. Therefore, the TMDL assigns waste load allocations to MS4 dischargers, as required. The TMDL also recognizes the potential contribution from other point sources and nonpoint sources in the watershed and assigns waste load and load allocations to these sources as well. The proposed TMDL has been modified to include MS4 outfall monitoring to ensure that municipalities are only held accountable for their own discharges. No delay in TMDL adoption is needed.

Number	Comment	Response
8.2	We respectively request that you ask the EPA to renegotiate the timeline in the settlement agreement with the environmental community. Since the EPA has recently requested changes in the settlement agreement successfully, we do not feel this is an unreasonable request.	At the June 3, 2010 Regional Board meeting, the Director of EPA Region IX Water Division stated that EPA would not negotiate any additional changes to the consent decree beyond what they has already agreed to with NRDC, Heal the Bay, and Santa Monica Baykeeper (plaintiffs) in the consent decree revision noticed on April 12, 2010.
Environmental Protection Agency		
9.1	The U.S. Environmental Protection Agency (EPA) appreciates the opportunity to comment on the proposed bacteria indicator total maximum daily loads (TMDLs) for the Santa Clara River Estuary and Reaches 3,5,6 and 7, and the associated draft Basin Plan amendments, dated April 21, 2010. The TMDLs meet all federal regulatory requirements under the Clean Water Act and EPA supports the adoption of the TMDLs. However, we find the TMDL can be improved by including the following clarifications.	Comment noted.
9.2	Since the Reach 7 impairment listing was based on 1995-1996 data, and recent data was not collected to confirm the impairment, we suggest adding clarifying statements identifying responsible jurisdictions in Reach 7, and requiring these parties to monitor and determine if they are meeting Waste Load Allocations. We also urge you to consider adding outfall monitoring requirements to the compliance monitoring section of the TMDL.	The impairment for Reach 7 was based on older data. However, the State's Listing Policy requires the consideration of older data unless a change has occurred in the waterbody that warrants exclusion of the older data. Clarifying language has been added to the proposed TMDL explaining which waste load allocations apply to which reaches. The proposed TMDL has been modified to include MS4 outfall monitoring requirements and a discussion of how the outfall monitoring data will be used to determine compliance with waste load allocations assigned to MS4 Permittees.
9.3	We appreciate the additional information you provided regarding the inclusion of an implicit margin of safety and are in agreement that the language	In response to communication with EPA staff, the following language change is proposed for the margin of safety:

Number	Comment	Response
	should be revised. We suggest the addition of language regarding bacterial decay in discharges from storm drains to be similar to those included in the Los Angeles River TMDL: “An implicit margin of safety is incorporated in the interim allocations through the use of a conservative assumption of no (0) bacterial decay in discharges from storm drains to the receiving water when determining the assimilative capacity of the river segments and tributaries.”	"An implicit margin of safety was assumed ~~B~~by directly applying the numeric water quality standards and implementation procedures as WLAs. This ensures that there is little uncertainty about whether meeting the TMDLs will result in meeting the water quality standards." Staff also proposes to add the language from the Los Angeles River Bacteria TMDL as follows: “An implicit margin of safety is incorporated in the allocations through the use of a conservative assumption of no (0) bacterial decay in discharges from storm drains to the receiving water when determining compliance with allocations.”
9.4	As a recommendation to the implementation plan, we suggest the Regional Board include a wet weather interim allocation for the Estuary and Reaches 3,5,6, and 7 to better track and show the steps of progress over a 14 year implementation period.	The proposed TMDL has been modified to include interim in-stream allocations based on the historical exceedance probability of single sample bacteria objectives at the existing monitoring locations to ensure no degradation of water quality. Additionally, language has been added to the Basin Plan amendment specifying that the proposed milestones in the MS4 permittees’ implementation plan will be considered by the Regional Board as permit conditions when the MS4 is reopened or reissued. The implementation schedule has also been revised to include a requirement that MS4 permittees provide a verbal update to the Regional Board on TMDL implementation progress.
9.5	Also, we recommend the addition of informational language to Section 7.2.1 Structural BMPs – On Farm BMPs and Equestrian BMPs of the implementation section: “There may be funding available through the National Resources Conservation Service (NRCS) for the BMPs listed and others developed for the region, as well as	The proposed language has been added to the staff report and BPA. A discussion of additional sources of financing, such as CWA section 319h funding, has been added as well. In addition, a summary of the cost assessment for implementation by agriculture that was included in the staff report has been added to the BPA.

Number	Comment	Response
	technical advice for implementation. Land managers can use various incentives and regulatory approaches to encourage riders to use and abide by local restrictions and regulations."	
9.6	We commend your hard work on these TMDLs and strongly recommend adoption by the Regional Board.	Comment noted.
County of Los Angeles: Flood Control District		
10.1	Thank you for the opportunity to comment on the proposed amendment to the Water Quality Control Plan for the Los Angeles Region to incorporate the Total Maximum Daily Load (TMDL) for bacteria in the Santa Clara River Estuary and Reaches 3, 5, 6, and 7. Based on our review of the proposed TMDL and the supporting draft Staff Report, the following comment is submitted on behalf of the Los Angeles County Flood Control District (LACFCD). The LACFCD also concurs with the comments submitted by the County of Los Angeles and hereby incorporates them by reference.	Comment noted.
10.2	Our review found that Sections 6.3 and 7.1 of the draft Staff Report identifies the LACFCD as a responsible party under the TMDL. The draft Staff Report should not name the LACFCD as one of the responsible parties for meeting the TMDL's waste-load allocations (WLAs) for several reasons. First, none of the land areas draining to the LACFCD storm drains that empty into the Santa Clara River are under the jurisdiction of the LACFCD. Secondly, the LACFCD storm drains function solely as a conveyance for urban and stormwater runoff from upstream entities and do not generate any of the	Staff disagrees. The LACFCD is listed as a permittee in the Los Angeles County MS4 permit, which is one of the regulatory permits identified in the TMDL to implement waste load allocations. Furthermore, the LACFCD, as the owner and operator of many of the storm drains in the watershed, is responsible for ensuring that water discharged from its facilities does not cause or contribute to exceedances of water quality standards. Unless the dischargers can demonstrate their discharges did not contribute to the exceedances coming from the outfall, MS4 discharges are jointly and severally liable for discharges from the

Number	Comment	Response
	pollutants of concern at issue in the TMDL. Finally, the LACFCD does not control land uses within the municipalities and, therefore, has no practical means of preventing the pollutants at issue flowing from those land uses from entering its facilities and the Santa Clara River. For these reasons, we respectfully request that the draft Staff Report be revised to remove the LACFCD as a responsible party.	common storm drain system. The inter-connected nature of the storm drain system makes it difficult to determine exactly where pollutants originated within the MS4. In such an integrated system, one or more permittees may have caused or contributed to violations. Thus, permittees are jointly and severally liable either because a permittee is one of several sources that discharge pollutants or a permittee conveys and ultimately discharges pollutants that may have originated further up the MS4. In both cases, the MS4 owner and operator is responsible for pollutants discharged from its system. This joint and severally liability is consistent with the law. The Clean Water Act, recognizing that permittees may seek permits based on system-wide, not jurisdiction-by-jurisdiction, discharges, imposes additional roles and responsibilities upon those permittees. By accepting this type of permit, the permittees implicitly agree to accept the responsibilities necessary to control and reduce the discharge of pollutants in commingled discharges [40 C.F.R. sections 122.26(d)(2)(iv), (d)(2)(vii), (d)(2)(i)(D),and (d)(2)(iv)(B)(3).] As the owner and operator of storm drains, LACFCD has responsibility for the routine maintenance of its facilities, including inspections, clean outs and other maintenance. Additionally, LACFCD has the authority to install pollutant controls at the points of entry to its facilities, or within its facilities. These activities are feasible means of preventing the pollutants at issue from entering the Santa Clara River.
County of Los Angeles		
11.1	As a general note, our review found numerous inconsistencies between the proposed Basin Plan Amendment and the draft Staff Report, which should be corrected to minimize confusion.	Corrections will be made where identified in the comment letter.

Number	Comment	Response
11.2	**Responsible parties should be responsible for their own discharges** The proposed Basin Plan Amendment provides that the responsible parties are responsible for meeting the waste-load allocations (WLAs) assigned to the Municipal Separate Storm Sewer System discharges. We support the proposition that each responsible party should be responsible for its own discharge. We note that Section 7.1 of the draft Staff Report on page 54 states that responsible parties are "jointly responsible" for meeting the WLAs assigned to the Municipal Separate Storm Sewer System discharges. The draft Staff Report should be modified so that it is consistent with the Basin Plan Amendment itself, which does not use the "jointly responsible" language. This comment is based on the fact that agencies cannot be held jointly liable for meeting the WLAs because each does not have control over the actions of another. Additionally, the Los Angeles County Municipal Stormwater Permit provides that each discharger is responsible only for a discharge for which it is the operator. The TMDL, as it applies to municipal permittees, should be consistent with the permit. Recommendation: Revise the draft Staff Report to indicate that responsible parties are not jointly responsible for meeting the WLAs assigned to Municipal Separate Storm Sewer System discharges.	The language in the tentative Basin Plan amendment is incorrect and is revised to reflect the language in the staff report, which is correct. Unless the dischargers can demonstrate that their discharges did not contribute to the exceedances coming from the outfall, the dischargers <u>are</u> jointly and severally liable for meeting the waste load allocations assigned to MS4 discharges. The inter-connected nature of the storm drain system makes it difficult to determine exactly where pollutants originated within the MS4. In such an integrated system, one or more permittees may have caused or contributed to violations. Thus, permittees are jointly and severally liable either because a permittee is one of several sources that discharge pollutants or a permittee conveys and ultimately discharges pollutants that may have originated further up the MS4. In both cases, the MS4 owner and operator is responsible for pollutants discharged from its system. This joint and severally liability is consistent with the law. The Clean Water Act, recognizing that permittees may seek permits based on system-wide, not jurisdiction-by-jurisdiction, discharges, imposes additional roles and responsibilities upon those permittees. By accepting this type of permit, the permittees implicitly agree to accept the responsibilities necessary to control and reduce the discharge of pollutants in commingled discharges [40 C.F.R. sections 122.26(d)(2)(iv), (d)(2)(vii), (d)(2)(i)(D),and (d)(2)(iv)(B)(3).]

Number	Comment	Response
11.3	**The deadline to achieve compliance should be substantiated by analysis** The proposed TMDL provides 8 and 14 years to achieve compliance with WLAs for dry and wet weather, respectively. Neither the draft Staff Report nor the TMDL contains an analysis of whether the TMDL's limits can be reached within the time frame proposed. Recommendation: Perform an analysis of whether the TMDL's limits can be reached within the time frame proposed before assigning the compliance deadlines.	Land uses in the SCR watershed are 90.5% open space, 3.2% agriculture, 1.5% high density residential, and 1.2% low density residential. The developed area in SCR watershed is similar to the area of the Ballona Creek, Ballona Estuary, and Sepulveda Channel Bacteria TMDL, and a similar implementation time frame was given for the proposed SCR TMDL.
11.4	**The geometric mean should not be calculated daily** The U.S. Environmental Protection Agency (EPA) originally intended the use of the geometric mean as a tool to determine the condition of a water body over a longer period of time and to detect chronic problems. The EPA's 69 Fed. Reg. 67218, 67225 (Nov. 16, 2004), states that "because a geometric mean provides information pertaining to water quality that looks backwards in time, it is not necessarily useful in determining whether a [water body] is safe for swimming on a particular day." Further, the EPA (page 67224 of the 69 Fed. Reg.) states that "it would be technically appropriate to apply the averaging period on a set basis such as monthly or recreational season." In other words, the geometric mean is intended as an assessment tool for condition over time and not from day to day. Therefore, the proposed TMDL's use of the rolling	The calculation of a daily geometric mean is consistent with other bacteria TMDLs adopted previously in the region. Calculating a strictly calendar month geometric mean may not identify a condition in which exceedances occur between months. Furthermore, a reconsideration of some bacteria TMDLs is currently being developed by staff to address issues including implementation of the 30-day rolling geometric mean. Implementation of other bacteria TMDLs in the region will be consistent with recommendations stemming from the reconsideration.

Number	Comment	Response
	30-day period is inconsistent with the EPA's original intent. Recommendation: Revise the proposed TMDL so that the geometric mean is calculated once per month or once per season.	
11.5	**The geometric mean WLA should be based on the reference system approach** The proposed TMDL sets the geometric mean WLA at zero day without providing adequate justification. According to a Los Angeles River Watershed study conducted by Cleaner Rivers through Effective Stakeholder-led TMDLs, a significant number of geometric mean exceedances were found at the reference sites in that watershed. Including results from the so-called minimally impacted sites, the reference system exceeded the geometric mean numeric target 16 percent of the time; the number of exceedances is reduced to 1.5 percent when results from the minimally impacted sites are excluded. By arbitrarily setting the geometric mean WLA at zero, the proposed TMDL is essentially requiring the treatment or diversion of nonanthropogenic sources of bacteria. Further, setting a reference system-based geometric mean standard would not be unprecedented; it has been applied by other California Regional Water Quality Control Boards, including the San Diego Region. Recommendation: Revise the proposed TMDL so the geometric mean WLA is established in	In the past US EPA has indicated that it would not support modified targets for geometric mean objectives based on allowable exceedance days. As such, the TMDL does not include any allowable exceedances of geometric mean targets in the allocations, consistent with previous adopted bacteria TMDLs in the Los Angeles region.

Number	Comment	Response
	accordance with the reference system approach and include minimally impacted sites in the calculation.	
11.6	**The TMDL should recognize the ongoing scientific progress on bacteria** There are ongoing scientific studies of the bacteria indicators currently being used in the TMDL. Recent studies conducted in Southern California have indicated the absence of correlation between traditional bacteria indicators and human health risks. The EPA recognizes the lack of sound science on bacteria and is currently conducting studies to establish new bacteria indicators and associated criteria for recreational waters by 2012. Further, the Southern California Coastal Water Research Project is also currently conducting an epidemiological study in Southern California and is expected to address some of the existing scientific limitations. Therefore, developing the TMDL based on traditional indicators, which do not accurately predict the risk of illness, may lack scientific justification and needs reconsideration as new findings are made available. Recommendation: Revise the TMDL resolution to add language that acknowledges the existence of ongoing studies and the possibility that the TMDL would be revised in the future to reflect the findings of the studies and/or new standards that may result thereof.	The proposed TMDL has been modified to incorporate reconsideration four years after the effective date of the TMDL if monitoring and any voluntary local reference system studies justify a revision, or if US EPA publishes revised recommended bacteria criteria.

Number	Comment	Response
11.7	**Establish allowable exceedance days for weekly sampling** Table 7-36.2 of the proposed TMDL shows the allowable exceedance days for dry and wet weathers without indicating whether they apply to a specific sampling frequency. Although the draft Staff Report provides more information, it does not sufficiently clarify Table 7-36.2 of the proposed TMDL. Recommendation: Revise Table 7-36.2 of the proposed TMDL to show the allowable exceedance days for both daily and weekly sampling.	The footnotes to the table of annual allowable exceedance days were included in the draft staff report (Table 6-1) but not the tentative BPA (Table 7-36.2). The footnotes explain how the allowable number of exceedance days would be scaled down if less than daily (e.g., weekly) sampling is conducted. The BPA has been revised to include the footnotes.
Newhall Land		
12.1	<u>Feasibility of Meeting Reference System-based WLAs is Unknown, Alternative Natural Source Exclusion Approach Should be Used</u> Fundamentally, there is significant uncertainty regarding the feasibility of bringing dry and wet weather urban runoff, *regardless of mitigation funds expended,* into consistent compliance with reference watershed-based bacteria exceedance rates at a subwatershed or city-wide scale (due to persistent downstream regrowth). Without information to support their attainability, the natural reference watershed-based WLAs, which then will be applied in the MS4 permits as enforceable numeric effluent limits – are unproven (from an implementation standpoint) and may exceed the Clean Water Act requirement of "maximum extent practicable." However, the Natural Source Exclusion (NSE)	Staff recognizes that there are natural sources of bacteria that may cause or contribute to exceedances of the single sample objectives and that it is not the intent of the Regional Board to require treatment of natural sources of bacteria from natural areas. As such, a reference system approach has been proposed in the tentative Basin Plan Amendment and draft staff report which includes allowable exceedances of bacteria objectives. The reference system approach takes into account natural sources of bacteria including re-growth. The proposed outfall monitoring will assist in excluding natural sources of bacteria from MS4 compliance evaluations. The proposed TMDL reconsideration at Year 4 can consider application of a natural sources exclusion approach if all anthropogenic sources of bacteria have been controlled and natural sources have been quantified.

Number	Comment	Response
	approach, which sets the allowable exceedance rate at the observed receiving water condition after all anthropogenic sources of bacteria (which are more closely linked to adverse human health effects) have been controlled, is a more feasible alternative that should be used for this TMDL since it sets the implementation requirements at a mitigated urbanized condition (as opposed to a pristine undeveloped/unimpacted condition), and it is still protective of human health and the recreational beneficial uses. This is particularly true given the difficulty of finding appropriate or comparable reference stream and beach sites; page 21 of the Draft TMDL Staff Report even acknowledges this fact by stating, "Regional Board staff recognizes the most appropriate reference systems may not be identified." Unless this change to a NSE approach is made, significant additional/unnecessary MS4 implementation costs (approximately $300 million capital cost estimated in the Staff Report, not including non-structural BMPs or operations and maintenance) – and associated environmental impacts due to the proposed implementation measures – may be expended to comply with the reference system-based WLAs despite having an acceptable alternative NSE approach available. Therefore, Newhall recommends that the NSE approach be used in place of the reference system approach. If this change is not made, additional documentation should be provided to explain Board staff's rationale (as currently written, section 2.1.3 of	Staff disagrees downstream re-growth of bacteria would prevent urban runoff from being brought into consistent compliance. The CREST Bacterial Source Identification (BSI) Study examined potential dry weather sources of bacteria to Reach 2 and 4 of the Los Angeles River. Using a mass balance approach, the study determined that in-stream sources of bacteria in dry weather were minor compared to storm drain loading and tributaries in Reach 4. Using the same approach in Reach 2, the study found up to 55% of the bacteria loading was from storm drain and tributary loading. The uncharacterized sources in Reach 2 were attributed to in-stream sources. Therefore, controlling storm drain loading can result in in-stream compliance.

Number	Comment	Response
	the Draft TMDL Staff Report doesn't provide sufficient analysis of the NSE alternative).	
12.2	<u>Wet Weather Source Assessment is Unsupported and Requires Revision</u> Page 47 of the Staff Report states, in summary, that "MS4s appear most likely to be the largest source of bacteria to the SCR," however *no E. coli* data are provided to support this statement for wet weather conditions. *E. coli* is the only indicator used for setting the TMDL WLAs and will be the only remaining freshwater recreational criterion once fecal coliform is removed per the current draft Basin Plan Amendment [tentatively dated July 8, 2010]). The calculated storm loadings at LA County mass emission site S29 are representative of wet weather loads from the entire subwatershed area, which includes significant open space, agricultural, MS4, construction, industrial, school district, and other regulated discharger categories. No conclusion can be made about relative MS4 loadings based on these measured fecal coliform mass emissions. In fact, a land use-based load analysis (Attachment A) using SCCWRP data indicates that the open space land use category likely contributes the greatest wet weather bacteria loads in the SCR watershed. A similar analysis needs to be provided by the Regional Board to support this and other TMDL source assessment conclusions. Or,	The source assessment supports the assignment of waste load allocations to MS4 discharges. Staff agrees that the calculated annual storm loadings at the mass emission station are representative of loads from the entire watershed area, including open space. However, the calculation of mass loading at the mass emission station and the relative load contribution from the WRPs described in section 4.2 of the staff report were merely used to supplement the presentation of monitoring data in section 4.1 of the staff report, which demonstrate that MS4 discharges are a significant source of bacteria. First, staff examined MS4 mass emission data, which shows exceedances of bacteria objectives in the river. Then, staff examined the data from Sespe and Piru Creeks, which represent natural landscapes in the watershed, and these data showed no exceedances of bacteria objectives. Staff examined data from storm drains and channels draining urban areas in the watershed and these data show levels bacteria that exceed objectives. In addition to this local data, data from studies conducted throughout the Los Angeles Region and Southern California demonstrate that bacteria concentrations are 2-3 orders of magnitude greater in developed areas than in natural areas. This cumulative evidence strongly suggests that discharges from the MS4 are a source of bacteria and the TMDL assigns waste load allocations to these discharges accordingly. However, even though staff could not quantify the contribution of nonpoint sources such as horses and livestock, onsite wastewater treatment systems, and irrigated lands, the TMDL

Number	Comment	Response
	alternatively, DNA-based source characterization studies, such as those conducted in other watersheds (e.g., Morro Bay), should be conducted during TMDL development so that a more informed source assessment section can be provided and a phased implementation schedule (by prioritized reach) proposed within the Basin Plan Amendment. Unless such quantitative source assessment analysis is provided, the proposed numeric exceedance day WLAs are unsupported and should be removed or changed to BMP-based requirements.	recognizes their potential contribution and assigns allocations to these sources as well. The load allocations are based on the same allowable number of exceedance days of the concentration-based target as allocated to the MS4 discharges. No change is needed to revise the source assessment. The contribution from other sources has already been considered and these sources have been assigned allocations.
12.3	<u>Wet Weather WLAs for Reaches 5, 6, and 7 are Unsupported and Should be Removed</u> No *E. coli* data are provided to demonstrate that wet weather exceedance rates in Reaches 5, 6, and 7 are above the reference watershed-based allowable exceedance rates (in other words, it is unknown whether these reaches are out of compliance with their *E. coli* WLAs), therefore *there is no basis for setting wet weather WLAs for these reaches and it is not clear whether they are necessary or if implementation efforts are required*. Regarding the data that are summarized for these reaches, the Newhall Ranch Water Reclamation Plant (WRP) and Los Angeles County Sanitation District (LACSD) monitoring data were collected during dry weather only, consistent with their NPDES permit monitoring and reporting requirements, and the LADPW mass emission data for site S29 (reach 6) includes only	The staff report examined impairments based on existing bacteria water quality objectives. Currently, the freshwater bacteria objectives are for both fecal coliform and *E. coli*. The Basin Plan amendment revising the bacteria objectives to remove fecal coliform has not been considered by the Regional Board and if it is approved by the Regional Board, must still be approved by the State Board, OAL, and EPA. Therefore, for assessment purposes, fecal coliform data are still relevant. The *E. coli* data was collected by Newhall in dry weather, but data collected from other sources and the literature show that wet-weather loadings of bacteria are greater than dry-weather, so wet-weather WLAs for *E. coli* are appropriate. The data collected by the Saugus and Valencia plants were collected weekly, and some of the samples reflect wet-weather conditions as defined by the TMDL (days of equal to or greater than 0.1 inch rain and 3 days after).

Number	Comment	Response
	fecal coliform, which is not used for setting the TMDL WLAs and is proposed to be removed from the LA Basin Plan's freshwater recreational use objectives. Therefore the wet weather WLAs for these reaches should be eliminated until such data is provided to demonstrate a history of wet weather exceedance rates that are above those that are allowed.	Regarding the analysis of stormwater mass emission data in Reach 6, *E. coli* is a subset of fecal coliform and the assumption that *E. coli* is equal to fecal coliform is a conservative assessment of impairment. Finally, receiving water data showed exceedances of both fecal colifom and *E. coli* in Reach 3 in wet weather. The proposed TMDL assigns waste load allocations to dischargers in all upstream reaches and tributaries because they can cause or contribute to impairments in downstream reaches.
12.4	<u>Reference System-based WLAs are Inappropriately Derived and Should be Recomputed</u> Both the dry and wet weather WLAs should be based on 90th percentile reference site exceedance rates, consistent with the wet weather day adjustment (described on page 49 of the Draft TMDL Staff Report) which uses the 90th percentile number of wet weather days to avoid "an untenable situation where the reference system is frequently out of compliance". In other words, the reference stream and beach sites should be ranked by exceedance rates, and the 90th percentile dry and wet weather exceedance rates should be selected as the basis for TMDL WLAs, otherwise the situation will unavoidably soon exist where *numerous reference sites will have greater reported exceedance rates than the TMDL WLAs that are required for MS4 dischargers*. Stated yet another way, the proposed TMDL WLAs (which, it is assumed, are average exceedance rates based on a compilation of data	The allowable freshwater exceedance rate in the TMDL is <u>not</u> the average of the exceedance rates from multiple reference sites. Instead, the samples from 38 reference sites were combined, and one exceedance rate was calculated for the whole data set. The exceedance rate is equal to the total number of exceedances divided by the total number of samples. The staff report has been revised to clarify this approach. The approach of combining the data from all 38 of the freshwater reference sites is more representative of the broad range of conditions that can occur across different reference sites than choosing the individual reference site with the 90th percentile exceedance rate. For the saltwater reference condition, the exceedances rate is calculated as the average of two reference beach sites. Based on the data sets for the two beaches, this approach is representative of the conditions for both beaches. The staff report has been revised to include the underlying data for the freshwater reference system studies as an appendix.

Number	Comment	Response
	from multiple reference sites) are more stringent than rates that have been observed at several individual reference watersheds. This allowable exceedance rate change is expected to increase both the dry and wet weather WLAs considerably, and result in more reasonable, but still protective, implementation. Furthermore, there is a lack of transparency in the Draft TMDL, as the raw reference site monitoring data should be provided in a technical appendix along with Regional Board staff's analysis demonstrating the basis for the allowable exceedance rates reported in Table 6-1 of the Draft Staff Report	Regional Board staff has requested the underlying data for the beach reference system studies from SCCWRP. Staff will provide the underlying data used for the beach reference conditions as an appendix once data are available.
12.5	<u>Wet Weather WLAs are Inconsistent with SCCWRP Data and Should be Recomputed</u> The allowable wet weather exceedance rate shown in Table 6-1 on page 52 of the Draft TMDL Staff Report for Reaches 3, 5, 6, and 7 is 19%, however this rate is significantly below the *E. coli* freshwater single sample reference stream exceedance rate reported in SCCWRP Technical Report 500 which reports a 50% wet weather exceedance rates (figure provided below for reference) based on wet weather monitoring data for 22 natural reference streams. Therefore the wet weather WLAs should be recomputed based on a correct allowable exceedance rate. Furthermore, consistent with the comment immediately above, the 90th percentile exceedance rate reference sites should be used to	The allowable wet-weather exceedance rate shown in Table 6-1 of the draft staff report is based on the combined data from SCCWRP Technical Report 500 (22 sites), Technical Report 542 (12 sites), and Technical Report 448 (4 sites). The exceedance rate is equal to the total number of exceedances divided by the total number of samples, not the average of the exceedance rate from each site. The staff report has been revised to clarify this approach. The approach of combining the data from all 38 of the freshwater reference sites is more representative of the broad range of conditions that can occur across different reference sites than choosing the individual reference site with the 90th percentile exceedance rate.

Number	Comment	Response
	set the allowable exceedance rates for the WLAs to avoid "an untenable situation where the reference system is frequently out of compliance" (from page 49 of the Draft TMDL Staff Report). This situation will undoubtedly exist if an average exceedance rate of multiple reference sites is used, as is currently proposed.	
12.6	<u>Allowable Exceedance Rates for Geometric Mean Objectives Need to be Added</u> It is in inconsistent to allow reference watershed exceedances for single sample limits but not for geometric mean limits. The result of this will be to cause "an untenable situation where the reference system is frequently out of compliance" (from page 49 of the Draft TMDL Staff Report), as is the case currently at the reference beach (Leo Carrillo/Arroyo Sequit) for the Santa Monica Bay beaches bacteria TMDL where a recent Jurisdictional Group 1/4 TMDL implementation study (Geosyntec 2009) demonstrated consistent exceedance of the geometric mean limits at the reference beach site. Therefore the geometric mean-based WLAs (zero allowable days) are overly restrictive and may trigger MS4 implementation costs beyond what is required by the Clean Water Act, in addition to environmental impacts associated with those implementation measures. We also raise a related and practical geometric mean compliance determination issue regarding dealing with non-detect monitoring results. At other	In the past US EPA has indicated that it would not support modified targets for geometric mean objectives. As such, the TMDL does not include any allowable exceedances of geometric mean targets in the allocations, consistent with previous adopted bacteria TMDLs in the Los Angeles region. The geometric mean, which indicates the central tendency or typical value of a set of numbers, is the nth root (where n is the count of numbers in the set) of the multiplied numbers. If the non-detect is assumed zero, then the product of concentrations of all samples will be zero and the geometric mean will be zero, no matter how high the concentrations for the other samples. Therefore, it is impossible to set non-detect as zero for the purpose of calculating geometric mean. The geometric mean is used for a set of numbers whose values are exponential in nature to avoid bias that may be caused by the inclusion of extremely high or low values. The detection limit is the lowest number of coliforms that can be distinguished from the absence of coliforms (a blank value) within a stated confidence limit. The detection limit is low enough to be representative of non-detect that can be used for geometric mean calculations.

Number	Comment	Response
	bacteria TMDL beaches, non-compliance is occasionally unfairly assessed due to the influence of non-detect assumptions in the rolling geometric mean calculations, such as when they assume a detection limit value (often 10 MPN/100ml but sometimes greater) in place of the non-detect results. Therefore, to avoid this mathematical issue, the TMDL should clarify that geometric mean compliance determination calculations shall assume a value of zero for all non-detect monitoring results.	
12.7	<u>Significant Newhall Ranch WRP Monitoring Data are Missing from Data Review Section</u> On pages 27-28 of the Draft TMDL Staff Report, significant pre-startup (monthly) and NPDES (quarterly or semiannual) monitoring data are not shown for the Newhall Ranch WRP, despite Newhall's reporting these results to the LARWQCB since 2004. In fact, only roughly 6% of the reported data are summarized in this section. The additional data need to be included to allow for a comprehensive and longer term evaluation of conditions in this reach.	Staff endeavored to analyze all available data during preparation of the TMDL. Regardless of the additional data from the Newhall WRP NPDES permit application, the data from Valencia WRP is enough to determine impairment in Reach 5, where the Newhall Ranch WRP is located. Additional data from Newhall Ranch are considered separate lines of evidence and will not affect determination of impairment in Reach 5.
12.8	<u>Reference Beach Dataset is not Appropriate for SCR Estuary thus WLAs Need to be Revised</u> The San Onofre and San Mateo beaches are cited as the TMDL reference sites that serve as the basis for the allowable single sample exceedance rates for the SCR Estuary, however, page 21 of the Regional Board Staff Report acknowledges that the most appropriate reference system may not be identified.	Staff agrees that conditions in an enclosed estuary are different than conditions at an open beach and this could impact bacteria levels at the reference site. The proposed TMDL has been modified to incorporate a reconsideration four years after the effective date of the TMDL if monitoring and any voluntary local reference system studies justify a revision. Stakeholders may propose and conduct studies to calculate exceedance probabilities for enclosed estuaries that are not impacted by human activities.

Number	Comment	Response
	Although both reference beach sites are lagoonal systems, the FIB data used as the basis for exceedance days was collected from the wave wash, not the lagoon. Microbiological conditions in an enclosed estuary (or lagoon) are drastically different than conditions in the open wave wash. Several studies have noted that in-situ bacterial growth within a closed estuary is impacted by stagnant water (i.e., lack of recirculation and flushing) (Gruber 2005), growth within accumulated sediments (Anderson 2005), and natural sources inhabiting the surrounding biologically diverse ecosystem. These conditions are not present in the open wave wash, nor do estuaries/lagoons provide the same wave-induced mixing/dilution that is seen in the open wave wash; therefore, *water quality samples collected from the open wave wash are not representative of estuarine FIB concentrations and cannot be compared with historic monitoring data from within an enclosed estuary*. The SCR Estuary allowable exceedance rates need to be revised to reflect reference sites with sample locations that are more representative of estuarine or lagoon enclosed beach conditions.	
12.10	<u>Implementation Plan Schedule Needs to Include a TMDL Reopener Milestone</u> Significant ongoing fecal indicator bacteria research and regulatory changes are occurring. For instance, epidemiological studies (e.g., by SCCWRP and others), microbial risk assessments, testing of new rapid measurement methods, new reference site	The proposed TMDL has been modified to incorporate reconsideration four years after the effective date of the TMDL if monitoring and any voluntary local reference system studies justify a revision, or if US EPA publishes revised recommended bacteria criteria.

Number	Comment	Response
	monitoring studies, and microbial source tracking investigations are being conducted and these results will better inform our understanding of actual recreational illness risks and how to better implement recreational water quality criteria through TMDLs and other regulatory programs. Furthermore, in acknowledgement of known weaknesses of the existing recreational water quality criteria (which serve as the basis for bacteria 303(d) listings and TMDLs in the Los Angeles Region), the US EPA is undergoing a criteria revision, to be completed in December 2012. And finally, experiences from multiple regional boards with the reference system and NSE bacteria TMDL approaches will have accumulated thereby allowing for more informed bacteria regulation in the near future. Therefore, to allow for consideration of this highly relevant information, *it is critical that the TMDL Implementation Schedule contained in the Basin Plan Amendment include a TMDL Reopener milestone within 3 to 4 years after the TMDL effective date*. It is our understanding that, to date, all Los Angeles region bacteria TMDLs have included this important milestone. Reconsideration of this TMDL is necessary to allow time for the other, preceding bacteria TMDLs to mature and have their progress tracked. A reopener would also allow for the reconsideration of reference-based exceedance day targets (based on new reference studies), indicators or methods (based on new method development studies), replacement of the reference watershed approach with the NSE approach (based on experience from the San Diego Region and	

Number	Comment	Response
	elsewhere), revision to the WLAs in response to a Basin Plan amendment that incorporates new EPA recreational water quality criteria, revision of the WLAs based on site-specific monitoring data or bacteria source tracking studies, or other possible changes based on new information.	
12.11	<u>Multiple Rain Gages should be used to Calculate the 90th Percentile Year for the SCR Watershed</u> The Staff Report evaluates the number of wet weather days associated with the 90th percentile year at three specific precipitation gages with acceptable quality of data and periods of record. The precipitation record at the Piru-Newhall Ranch gaging station, located in Reach 5, was selected to represent the number of allowable exceedance days for all SCR Reaches and the Estuary, despite it measuring the fewest number as compared to the other gages. The blanket application of wet days at a single station to all reaches addressed in the SCR TMDL is not appropriate give the extent of the SCR watershed – e.g., it may rain in an upper reach or tributary headwater, thus resulting in wet weather hydrologic [and associated bacteriologic] conditions in the mainstem of the SCR, meanwhile the Piru-Newhall gage reports no rainfall. Therefore we recommend that Board staff blend precipitation records from several representative gages to determine a more appropriate 90th percentile number of wet days, and approach that is more robust than using a single gage to represent the entire geographically-diverse SCR watershed.	Staff ultimately considered rain data from six stations in the SCR watershed to calculate the 90th percentile storm year and the number of wet days in the critical year. Staff considered four combined stations in the Estuary area, and the Santa Paula Canyon-Ferndale Ranch station in Santa Paula Creek, and the Piru-Newhall Ranch station in Reach 5. The 90th percentile year was found to be 1995 for the Estuary area stations (82 wet days), 1957 for the Santa Paula Canyon – Ferndale Ranch station (86 wet days), and 1995 for the Piru-Newhall Ranch station (81 wet days). The Santa Paula Canyon – Ferndale Ranch station has the highest number of wet days due to its relatively high elevation. The Estuary area stations and the Piru-Newhall Ranch station had the same storm year (1995) and similar number of wet days (82 and 81, respectively). The Piru-Newhall Ranch station was chosen to calculate the number of exceedances days for this TMDL because this station has the longest record of rain data (1927-2009), this station results in a similar number of wet days to other stations, and this station is located in the middle area of the SCR watershed. A high elevation rain gauge is not considered to determine the number of wet days because most of the developed area in the SCR watershed is located at lower elevations along the Santa Clara River.

Number	Comment	Response
	Blending gage data would involve combining multiple rainfall records into a single, more representative record by substituting zero precipitation measurements at one gage with non-zero measurements from another gage, and visa versa. At a minimum, if this more robust approach is not selected, it is recommended that the number of allowable wet days be based on the highest number of measured wet days (therefore a higher elevation gage may be more appropriate) which could affect downstream hydrologic conditions.	Finally, regardless of the station used, multiplying the number of wet days from each station by the allowable exceedance probability results in the same or similar number of allowable exceedances days. In other words, it doesn't make much of a difference which rain station is used, as follows: - Using 81 wet days results in an allowable number of freshwater wet-weather exceedance days of 16. - Using 82 wet days results in an allowable number of freshwater wet-weather exceedance days of 16. - Using 86 wet days results in an allowable number of freshwater wet-weather exceedance days of 17.
12.12	<u>Scientific Portions of the Draft TMDL Must Undergo External Scientific Peer Review</u> Page 7 of the Draft BPA states, "scientific portions of this TMDL are drawn from the previously adopted bacteria TMDLs in the region, including the Santa Monica Bay Beaches Bacteria TMDL. As a result, the scientific portions of this TMDL have already undergone external, scientific peer review." Health and Safety Code section 57004 requires external scientific peer review. The Santa Clara River and Estuary are different in many respects (i.e., biologically, geographically, geomorphically, hydrologically, etc.) from the Santa Monica Bay Beaches and the same scientific analysis cannot necessarily be assumed appropriate for this waterbody without external review and confirmation. Therefore this very important peer review process should not be circumvented before establishing long-	The scientific portions of this TMDL are drawn from the previously adopted bacteria TMDLs in the region, including the Santa Monica Bay Beaches Bacteria TMDL. As a result, the scientific portions of this TMDL have already undergone external, scientific peer review. Remaining portions of the TMDL, such as the implementation strategy, are not scientifically based, and therefore, not subject to the peer review requirements of section 57004. The portions of the TMDL that are subject to peer review are the same for the Santa Clara River TMDL and Santa Monica Bay Beaches TMDL. The objectives and numeric targets are the same and are based on the same epidemiological studies about the health risks of swimming in water with levels of bacteria exceeding standards. The approach for assigning waste load allocations is the same for both TMDLs. The allowable numbers of exceedance days are different for the Santa Clara River, being based on updated reference system studies, but the approach for analyzing and applying the updated studies is the same as in

Number	Comment	Response
	term, firm water quality objectives.	the Santa Monica Bay TMDL. The proposed TMDL for bacteria in the Santa Clara River is not establishing water quality objectives, but rather implementing existing water quality objectives.
12.13	<u>Dry and Wet Weather Implementation Plan Schedule is Not Realistic and Should be Revised</u> The Draft Basin Plan Amendment Implementation Schedule (Table 7-36.3) specifies that compliance with the LAs and MS4) WLAs must be achieved 8 and 14 years after the effective date of the TMDL for dry and wet weather, respectively. This equates to 4.5 and 11.5 years after final submittal and approval of the Implementation Plan for dry weather and wet weather, respectively. This time frame does not allow adequate time for studies (e.g., sampling and analysis to identify highest priority subcatchments), planning (i.e., siting, selecting, and initial concept development for structural BMPs), securing funding (i.e., bonds, general funds, etc.), jurisdictional coordination, design, permitting (including CEQA analysis/review which will be required for large projects), and construction of BMPs, as well as the completion of pilot testing of demonstration projects, if necessary. Furthermore, a phased funding approach is often employed in the design and construction of large-scale projects as it may be infeasible for municipalities to secure funding for all BMPs necessary to meet 100% of the TMDL WLAs all at one time, therefore funding timelines may be	The proposed implementation schedule is based on input from stakeholders at the TMDL development and CEQA scoping meetings and a consideration of the size of the developed portion of the Santa Clara River watershed. The 8-year dry-weather schedule and 14-year wet-weather schedule is appropriate for the Santa Clara River watershed and takes into account the implementation planning requirements for an urban watershed area of this size. The commentor incorrectly cites the implementation schedules for the Marina del Rey and Santa Monica Bay Beaches TMDLs. The 10- to 18-year implementation schedules included in the Marina del Rey and Santa Monica Bay TMDLs are for wet weather. The 14-year wet-weather implementation schedule proposed for Santa Clara River Bacteria TMDL falls within this range. The dry-weather implementation schedule for the Marina del Rey TMDL is 3 years and the dry-weather implementation schedule for the Santa Monica Bay TMDL is 3 years for summer dry weather and 6 years for winter dry weather. The proposed dry-weather implementation schedule of 8 years for the Santa Clara River TMDL is longer than the dry-weather implementation schedules for the Marina del Rey and Santa Monica Bay TMDLs.

Number	Comment	Response
	even longer. By comparison, both the Marina del Rey Harbor and Back Beaches and Santa Monica Bay Beaches Wet Weather Bacteria TMDLs specify 18 years after the TMDL effective date for full compliance with an integrated water resources implementation approach, and a shorter time schedule (10 years) without one. The implementation schedule specified in these past TMDLs is more reflective of the amount of time actually required for implementation. To allow proper time for all necessary implementation steps to proceed, TMDL compliance schedules of 10 and 18 years are recommended for dry and wet weather conditions, respectively.	
12.14	<u>Cost Analysis does not Reflect Actual Implementation Costs and Should be Revised</u> The cost analysis contained in the Staff Report uses costs presented in the Ballona Creek TMDL and scales them based on watershed size. This is a very inexact method and does not take into account features specific to the SCR watershed. Additionally, details on the proposed structural BMPs (i.e., locations, number, sizes, etc.) are not provided. The use of cost estimates contained in discharger-developed TMDL implementation plans (e.g., the City of Los Angeles Implementation Plan for the Ballona Creek and Estuary Bacteria TMDL) would provide a more accurate estimate as these costs are developed based on analysis of current conditions versus required WLAs, BMP siting opportunities and constraints, up-to-date BMP construction cost data,	The Regional Board is prohibited from prescribing the manner of compliance with the TMDL, but must analyze the costs of implementing the TMDL based on a reasonable range of implementation alternatives. The cost estimates in the proposed Santa Clara River Bacteria TMDL are similar to the cost estimates conducted for previous TMDLs (e.g., Ventura Harbor Beaches TMDL and Ballona Creek Bacteria TMDL). Staff did not use the cost estimates provided in discharger-developed implementation plans (e.g., the City of Los Angeles Implementation Plan for the Ballona Creek and Estuary Bacteria TMDL) because these plans were in draft form and not fully reviewed for completeness at the time of development of the proposed Santa Clara River Bacteria TMDL. Because staff cannot predict the location of implementation alternatives, staff cannot know if they will be placed on public or private land and cannot estimate land acquisition costs.

Number	Comment	Response
	and quantitative assessment analysis. Lastly, it is recommended that the cost of land acquisition costs be included; where public land is not available for BMP placement, the purchase of private land would be required. Therefore the TMDL cost estimates should be revised based on cost estimates that have been made available to Regional Board staff through numerous other bacteria TMDL implementation plans. In doing so, watershed-specific cost adjustments should be made to consider features specific to the SCR drainage network such as miles of storm drain, number of outlets, availability of public land for BMP siting, impervious area and/or other features is necessary for BMP siting, sizing, and costing.	