Response to Comments Matrix for the Los Angeles River Watershed Bacteria TMDL – Technical Report Section 3: Numeric Targets, dated October 2009

Comment Number	Commenter	Section	Comment	Response to Comment
1	Heal the Bay	6	It is unclear why the reference system/exceedance day approach is discussed in the "numeric target" section of the technical report. Other TMDLs have used the exceedance day approach as the WLA. Further, it is unclear how the exceedance day approach in Section 3 will be used at all in the TMDL implementation.	Other Bacteria TMDLs in Region 4 used the Exceedance Days for both the Targets and WLAs. This TMDL uses Exceedance Days for Targets and load allocations (LAs), and mass-based *E. coli* allocations for waste load allocations WLAs (WLAs). The Targets section presents the in-stream *E. coli* water quality targets/goals to protect the REC-1 beneficial use. There is a corresponding assimilative capacity, or total maximum daily load, from point and non-point sources (with considerations for a margin of safety) that would result in meeting the Targets (and thereby protecting the REC-1 beneficial use). The TMDL is split into LAs and WLAs for the various types of point source (MS4, industrial, etc.) and non-point source (natural sources) discharges in the Watershed. WLAs were calculated based on the assimilative capacity of the LA River, and thus attainment of the WLAs should result in attainment of TMDL Targets. The application of a load-based WLA provides very clear numeric goals that can be used as the basis of MS4 implementation strategies.

Response to Comments Matrix for the Los Angeles River Watershed Bacteria TMDL – Technical Report Section 3: Numeric Targets, dated October 2009

Comment Number	Commenter	Section	Comment	Response to Comment
2	Heal the Bay	6	The analysis uses data from three SCCWRP studies. The studies include dozens of "reference sites". How do we know that all of these sites are appropriate reference sites – it is unclear from the draft technical report. Do they have characteristics similar to the LA River? Why were not all of the data used in this analysis ("Some samples were collected during wet days, but SCCWRP recommended that these data not be used to represent weather conditions.")?	The allowable exceedance frequency (number of Exceedance Days) is based on a large-scale study performed by SCCWRP over two years in reference watersheds across southern California (over 400 samples). At this time, this is the most reliable dataset for determination of naturally-occurring *E. coli* WQO exceedance rates. Some samples were recommended by SCCWRP to not be included because they were not well-defined in terms of whether the sampling dates were wet or dry days. For quality control purposes, only data that were known to be specifically collected during dry or wet weather conditions were used in the analysis. Clarifying language was added to the section. Special studies are encouraged during TMDL implementation to evaluate and refine the frequency of natural exceedances.
3	Heal the Bay	6	The year 1993 is chosen as the critical "reference storm year" for determining exceedance days. More explanation is needed as to why this is an appropriate reference year for both dry and wet weather.	The year 1993 was used as the critical year to be consistent with previous Region 4 Bacteria TMDLs including Santa Monica Bay Beaches and Ballona Creek.
4	City of Downey	Page i	List of Tables, Tables 2, 3 & 5, modify Table header so that footnotes makers are not carried forward to Table of Authorities.	Formatting error corrected.

Response to Comments Matrix for the Los Angeles River Watershed Bacteria TMDL – Technical Report Section 3: Numeric Targets, dated October 2009

Comment Number	Commenter	Section	Comment	Response to Comment
5	City of Downey	Page 2	While we understand the concept of a reference watershed, we question whether the conditions that existed in the large relatively flat sections of the Los Angeles River are comparable to the relatively small and steep areas that we understand were used as reference site.	Indeed, the exceedance rate in natural watersheds monitored by SCCWRP may vary from the lower LA River under a natural or pre-development condition. The allowable exceedance frequency (number of Exceedance Days) is based on a large-scale study performed by SCCWRP over two years in reference watersheds across southern California (over 400 samples). At this time, this is the most reliable dataset for determination of naturally-occurring *E. coli* WQO exceedance rates. Special studies are encouraged during TMDL implementation to evaluate and refine the frequency of natural exceedances in the LA River.
6	City of Downey	Table 2	Table 2 has problems, but you've acknowledged that you are working on it. Can LB help in reducing the confusion or developing a new understanding? Some of these same issues are causing problems in the LAR MTMDL. Hard to enforce when the area is not known.	Agreed, the information in this table should be refined in the TMDL staff report.

Response to Comments Matrix for the Los Angeles River Watershed Bacteria TMDL – Technical Report Section 3: Numeric Targets, dated October 2009

Comment Number	Commenter	Section	Comment	Response to Comment
7	City of Downey	Table 3	Table 3, the issue of the minimally impacted sites might be neutralized by presenting the analysis with then. How many additional data points would three sites add and how severely could they increase 1.6 and 1.5%?	The analysis with minimally-impacted sites is presented in Appendix A of the Technical Report, "Source Assessment and Receiving Water Conditions for the Los Angeles River Watershed" (Table 25 and Table 26). The dry weather exceedance frequency of the SSM and geometric mean WQOs for *E. coli* inclusive of minimally-impacted sites was 7% and 16%, respectively.
8	Flow Science	6	We agree that EC provides superior protection to recreational users as FC, and recommend that the Regional Board adopt a Basin Plan amendment removing FC as a water quality objective (and leaving only EC).	Comment noted. At the time of this response to comments, removal of the FC WQO is being considered via Basin Plan Amendment by Regional Board staff.

Response to Comments Matrix for the Los Angeles River Watershed Bacteria TMDL – Technical Report Section 3: Numeric Targets, dated October 2009

Comment Number	Commenter	Section	Comment	Response to Comment
9	Flow Science	6	It is unclear why three sites (Cheseboro Cyn, Stone Creek, and Cajon Creek) were categorized as having "exceptionally high" concentrations. We have reviewed one SCCWRP report (No. 542) and find it unclear which watersheds were considered to have "minor perturbations" (see, e.g., text on p. 9 of the SCCWRP report, which states that *four* locations (not three) were considered to have "relatively minor perturbations" from background conditions, but these four locations are not named). Reasons provided in the TMDL Draft at p. 5 (and SCCWRP report at p. 9) include proximity to a major highway and a recent fire/heavy trail use. Both of these factors are likely to exist in an urban environment, even in otherwise undeveloped watersheds, and should not necessarily disqualify these locations from consideration as background locations. Indeed, these data appear to indicate that background locations nearer to sources of human disturbance may have a higher exceedance frequency than background locations in pristine areas far from human activity. Additional explanation should be provided, else these locations should be included in the calculation of exceedance frequencies.	The SCCWRP study "Fecal Indicator Bacteria (FIB) Levels During Dry Weather from Southern California Reference Streams" (Technical Report 542) was performed under process that included a Technical Advisory Committee (TAC). Under that process it was determined that the minimally-impacted sites should not be classified as reference sites. As a separate and subsequent stakeholder process, CREST is obligated to honor the process that excluded the minimally-impacted sites. Special studies are encouraged during TMDL implementation to evaluate and refine the frequency of natural exceedances in the LA River.

Response to Comments Matrix for the Los Angeles River Watershed Bacteria TMDL – Technical Report Section 3: Numeric Targets, dated October 2009

Comment Number	Commenter	Section	Comment	Response to Comment
10	Flow Science		The SCCWRP study appears to indicate that fecal indicator bacteria in all watersheds studies (apparently including those watersheds classified as having "minor perturbations") are non-human in origin. This is further evidence that these sites should be included in the calculation of background exceedance frequencies. This should be confirmed with SCCWRP, as Report 542 does not present the human indicator data and is not entirely clear.	It was reported by SCCWRP that there were zero detections of the human-specific marker *Bacteroides thetaiotaomicron*, which suggests that bacteria at reference sites are of non-human origin.
11	Flow Science	6	The SCCWRP studies examined concentrations of EC, enterococci (ENT), and total coliform (TC). FC was not studied. The fraction of samples that exceeded single sample maximum criteria varied, as shown in the Table excerpted from SCCWRP Technical Report 542 (Table 4) and pasted below. Clearly, these data indicate that it is possible that FC will exceed the relevant REC-1 criteria more frequently that EC.	At the time of this response to comments, removal of the FC WQO is being considered via Basin Plan Amendment by Regional Board staff.

Response to Comments Matrix for the Los Angeles River Watershed Bacteria TMDL – Technical Report Section 3: Numeric Targets, dated October 2009

Comment Number	Commenter	Section	Comment	Response to Comment
12	Flow Science	6	Data from the CREST study indicate that, in Reach 2, consistent increases in EC concentration to above WQO are not due to human sources. Six of six (100%) of dry weather sampling events showed an increase in EC criteria to above WQO (see final BSI report Fig. 6-6 at p. 6-14) between 6th St. and Slauson. These data appear to indicate that a 2% "allowable exceedance rate" based on natural background is not appropriate for the Los Angeles River, at least at this location.	Indeed, the exceedance rate in natural watershed monitored by SCCWRP may vary from the lower LA River under a natural or pre-development condition. The allowable exceedance frequency (number of Exceedance Days) is based on a large-scale study performed by SCCWRP over two years in reference watersheds across southern California (over 400 samples). At this time, this is the most reliable dataset for determination of naturally-occurring *E. coli* WQO exceedance rates. Special studies are encouraged during TMDL implementation to evaluate and refine the frequency of natural exceedances in the LA River, including the appropriateness of applying a Natural Source Exclusion.