Attachment 2 – Detailed Comment Matrix on Los Angeles River Bacteria TMDL Staff Report and Basin Plan Amendment

Detailed Comment #	Document Reference: (Doc., Section, Pg. #, Paragraph #)	Issue	Comments
1	**BPA,** page5, Waste Load Allocations, Table 7-39.4 **Staff Report,** Section 9.4.5, Table 9-5	MS4 Compliance	Please consider Request #1 in Attachment 1, as follows: The TMDL Staff Report and BPA should describe three "equivalent conditions" that represent MS4 compliance with final dry weather WLAs, which is similar to the approach taken in the LA River Trash TMDL. These three conditions correspond to: average concentrations of MS4 runoff being less than the WQO; zero flow from the MS4; or loading rates from the MS4s not causing or contributing to WQO exceedances. Furthermore, the language will allow "good actors" to demonstrate their actions address their discharges such that they are not causing or contributing to exceedances of the final WLAs. Please insert the following paragraph at the top of page 5 of the Tentative Basin Plan amendment (after the paragraph that begins with "The WLAs for" and ends with "allowable exceedances"), and into Section 9.4.5 of the Staff Report:[1] "This TMDL involves many responsible parties, and the dry weather implementation schedule includes actions at some downstream segments prior to upstream segments. MS4s can demonstrate compliance with the final WLAs – and differentiate their dry weather discharges from discharges from upstream sources and/or discharges from other responsible parties – by demonstrating one of the following equivalent conditions: 1. MS4 loading of *E. coli* to the corresponding LA River segment or tributary during dry weather is less than or equal to the loading rates detailed in the tables below. **[note: these tables are described in comment #2]** 2. Flow-weighted concentration of *E. coli* in MS4 discharges during dry weather is less than or equal to 235 MPN/100mL, based on a weighted-average using flow rates from all measured outfalls. 3. Zero discharge during dry weather"
2	**BPA,** page5, Waste Load Allocations **Staff Report,** Section 9.4.5	Interim MS4 Allocations	Please consider Request #2 in Attachment 1, as follows: The TMDL Staff Report should incorporate appropriate interim WLAs that are representative of interim rather than final conditions. Please insert the following paragraphs at the top of page 6 of the Tentative Basin Plan amendment (just below the language inserted for Request #1) and into Section 9.4.5 of the Staff Report:

[1] The corresponding changes to the Implementation Schedule are combined with Request #3, below.

<table>
<tr><th>Detailed Comment #</th><th>Document Reference: (Doc., Section, Pg. #, Paragraph #)</th><th>Issue</th><th>Comments</th></tr>
<tr><td></td><td></td><td></td><td>
"In addition, MS4 dischargers are assigned interim WLAs for dry weather to account for variability in bacteria discharges. Interim dry weather WLAs are set at 1.5 times the final WLAs. Responsible agencies can demonstrate compliance with these interim WLAs by demonstrating one of the three (3) equivalent conditions above, with the equivalent interim E. coli loading rates detailed in the Interim MS4 E. coli Loading Rates table below.

It is expected that MS4s will implement a suite of BMPs/actions that are designed to attain the final WLAs; the interim WLAs represent a minimum performance threshold that must be attained after that suite of actions is implemented, per the implementation schedule."

The E. coli loading rates for the interim and final equivalent conditions are as follows[2]:
<table>
<tr><th>River Segment or Tributary</th><th><u>Final</u> E. coli Load from MS4s during Dry Weather (10^9 MPN/Day)</th></tr>
<tr><td>Los Angeles River Segment A</td><td>274</td></tr>
<tr><td>Los Angeles River Segment B</td><td>471</td></tr>
<tr><td>Los Angeles River Segment C</td><td>421</td></tr>
<tr><td>Los Angeles River Segment D</td><td>413</td></tr>
<tr><td>Los Angeles River Segment E</td><td>29</td></tr>
<tr><td>Aliso Canyon Wash</td><td>21</td></tr>
<tr><td>Arroyo Seco</td><td>22</td></tr>
<tr><td>Bell Creek</td><td>13</td></tr>
<tr><td>Bull Creek</td><td>8</td></tr>
<tr><td>Burbank Western Channel</td><td>78</td></tr>
<tr><td>Compton Creek</td><td>6</td></tr>
<tr><td>Dry Canyon</td><td>6</td></tr>
<tr><td>McCoy Canyon</td><td>6</td></tr>
<tr><td>Rio Hondo</td><td>2</td></tr>
<tr><td>Tujunga Wash</td><td>9</td></tr>
<tr><td>Verdugo Wash</td><td>46</td></tr>
</table>
</td></tr>
</table>

[2] The corresponding changes to the Implementation Schedule are combined with Request #3, below.

<table>
<tr><th>Detailed Comment #</th><th>Document Reference: (Doc., Section, Pg. #, Paragraph #)</th><th>Issue</th><th>Comments</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><th>River Segment or Tributary</th><th><u>Interim</u> E. coli Load from MS4s during Dry Weather (10^9 MPN/Day)</th></tr>
<tr><td>Los Angeles River Segment A</td><td>411</td></tr>
<tr><td>Los Angeles River Segment B</td><td>707</td></tr>
<tr><td>Los Angeles River Segment C</td><td>632</td></tr>
<tr><td>Los Angeles River Segment D</td><td>620</td></tr>
<tr><td>Los Angeles River Segment E</td><td>44</td></tr>
<tr><td>Aliso Canyon Wash</td><td>32</td></tr>
<tr><td>Arroyo Seco</td><td>33</td></tr>
<tr><td>Bell Creek</td><td>20</td></tr>
<tr><td>Bull Creek</td><td>12</td></tr>
<tr><td>Burbank Western Channel</td><td>117</td></tr>
<tr><td>Compton Creek</td><td>9</td></tr>
<tr><td>Dry Canyon</td><td>9</td></tr>
<tr><td>McCoy Canyon</td><td>9</td></tr>
<tr><td>Rio Hondo</td><td>3</td></tr>
<tr><td>Tujunga Wash</td><td>14</td></tr>
<tr><td>Verdugo Wash</td><td>69</td></tr>
</table>
</td></tr>
<tr><td>3</td><td>BPA, page5, Waste Load Allocations, Table 7-39.4

Staff Report, Section 9.4.5, Table 9-5</td><td>Variability of bacteria sources</td><td>Please consider Request #3 in Attachment 1, as follows:

The TMDL Staff Report and BPA should incorporate language that acknowledges Unexpected Discharges. Please insert the following paragraphs at the top of page 7 of the Tentative Basin Plan amendment (prior to the paragraph that begins with “General NPDES Permits” and ends with “geometric mean target”), and into Section 9.4.5 of the Staff Report:

“Variability of bacteria sources is also addressed through categorization of some MS4 bacteria discharges as “unexpected.” Unexpected Discharges are those outfalls that [1] exhibit E. coli loading rates that are less than 25th percentile during the monitoring events used to develop implementation strategies, but then [2] exhibit greater than 90th percentile loading rates during later monitoring events used to compare MS4 loading to the interim and final WLAs. These types of discharges are very challenging for MS4s to control, and thus are excluded from the calculations used to compare MS4 loading to interim and final WLAs for compliance purposes. However, MS4s are required to take action to abate identified Unexpected Discharges, per the implementation schedule.”

The combined requested changes from Request #1, #2, and #3 would also affect the</td></tr>
</table>

Detailed Comment #	Document Reference: (Doc., Section, Pg. #, Paragraph #)	Issue	Comments
			implementation schedule table (Table 7-39.4 in the BPA and Table 9-5 in the Staff Report). As an example, the requested changes to the schedule for Segment B are shown in Attachment 1. Note that the table also includes deletion of the row specific to "Complete Implementation of LRS". In order to provide more flexibility to MS4s with regards to monitoring and BMP implementation, the schedule should only specify the date on which LRS completion and WLA attainment must be demonstrated.
4	**BPA,** insert new page, also Table 7-39.4 **Staff Report,** Section 9.8, Table 9-5	Special Studies and Reopeners	Please consider Request #4 in Attachment 1, as follows: Revise the Basin Plan amendment to include the optional special studies, particularly studies related to uncharacterized bacteria sources and information related to a stakeholder working group to support Basin Planning for recreational uses, as presented in the stakeholder Technical Report. Additionally, include at least one explicit reopener provision five years after the effective date of the TMDL. Section 9.5 of the Staff Report should include the optional special studies discussion from Section 8.4 of the Technical Report. Insert the following paragraph at the end of the Compliance Monitoring section of the Basin Plan Amendment (which should be re-named to "Compliance Monitoring and Special Studies"). **Optional Special Studies** Stakeholders are encouraged to develop special studies to evaluate the assumptions of this TMDL and to support the Basin Plan Triennial Review process. Two types of studies were highlighted by stakeholders as high priority, as described in the Staff Report: • Studies to assess recreational beneficial use designations, including formation of a Water Quality Standards Working Group. • Studies designed to characterize loadings from natural or in-stream sources and evaluate whether a Natural Source Exclusion is applicable.
5	**BPA** Pg. 4 **Staff Report** Pg. 41-42	Effect of HFS on Exceedance Days	The BPA and Staff Report are not sufficiently clear regarding the interaction of the HFS and exceedance days. Please insert the following sentence as a footnote to the table with final WLAs: "The allowable number of WQO exceedance days is fixed from year-to-year and independent of the annual number of days on which the HFS applies. The WQO does not apply during the HFS."

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6	**BPA** Table 7-39.1 Pg. 5 Paragraph Nested table	Segment letters are missing	Please place the appropriate designations of segments in the table (Segment A, B, etc.).
7	**BPA**, Pg. 5	WRP WLAs	The BPA is missing important language from the Staff Report. Specifically, please insert the following paragraph from page 52 of the Staff Report into the bottom paragraph on Page 5, related to WRPs. "The current coliform limits for these WRPs are sufficient, and no revisions to the WRP NPDES permits are necessary based on this TMDL. No additional actions are expected to be necessary for WRPs to be in compliance with the TMDL allocations." Incorporation of this language into the BPA (not just Staff Report) is critical to avoid unnecessary additional requirements in the WRP permits.
8	**BPA** Pg. 6 Implementation	LA implementation	Please be specific on how the LAs will be implemented through California's 2004 Nonpoint Source Pollution Control Program. Does this mean parties responsible for LAs will be required to submit and implement a monitoring program and potentially an implementation plan?
9	**BPA** Pg. 7 Implementation **Staff Report** Pg. 52	LRS requires coordinated effort by all MS4 Permittees.	The Staff Report and BPA seem to suggest that an LRS can only be performed in all MS4s within a segment or tributary coordinate their efforts. Please modify this language to be clear that individual or subgroups of Permittees can perform LRS's. The ability to perform an LRS should be not based on whether other agencies will be cooperative. Please modify this language as outlined below to be clear that individual or subgroups of Permittees can perform LRS's. "Individual MS4 Permittees or subgroups of MS4 Permittees may choose to develop and implement alternative implementation strategies for dry weather implementation. ~~, then the g~~Group-based WLAs may be distributed based on proportional drainage area, upon approval of the Executive Officer. The implementation approaches herein, including the use of an MS4 Load Reduction Strategy, can still be followed based on the proportional WLAs. Proportional WLAs will be calculated utilizing the *E. coli* loading rates presented in the tables above and in the waste load allocations section."

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10	**BPA** Pg. 7 Implementation **Staff Report** Pg. 64	Wet Weather Feasibility	Given the ubiquitous nature of bacteria, and the fact that even open spaces (see the SCCWRP study cited in Staff Report page 24) have been shown to discharge runoff with concentrations in excess of the WQO, the City has serious concerns regarding the feasibility of attaining the wet weather TMDL, even with billions of dollars of expenditure. There has been no demonstration by the Regional Board that available BMPs can result in urbanized receiving waters attaining WQOs during wet weather. The quantitative analyses provided by MS4s may demonstrate that wet weather compliance is infeasible (i.e., all runoff from the watershed cannot be treated). The Staff Report and Basin Plan should include provisions to re-consider the TMDL if the wet weather implementation is demonstrated to be infeasible or subject to serious economic harm to municipalities in the Watershed. This reconsideration should include the possibility of establishing an "attainable level" of water quality (i.e., concentrations above the WQOs).
11	**BPA** Pg. 7 Implementation	WLA implementation plan, the term "cooperatively"	Statement: "Responsible parties must provide an Implementation Plan to the Regional Board outlining how each intends to cooperatively achieve compliance with the wet-weather WLAs." This could be interpreted to require all WLA responsible parties (40+ agencies) to work together to submit and implement one plan? Please clarify that individual agencies can submit individual compliance plans for their jurisdiction.
12	**BPA** Pg. 8 **Staff Report** Pg. 72-73 Section 9.7.1 Bullets	WLA compliance monitoring	The Staff Report states that the CMP shall include at least one monitoring location in each segment, reach, and tributary addressed by the TMDL; however, the segments and reaches overlap (i.e. – Segment A includes Reach 1 and part of Reach 2, Segment B includes part of Reach 2, etc.) so the monitoring requirement should be either for the reaches or for the segments, but not both, as this is redundant. It is recommended that only segments are required for monitoring as they are hydrographic unit used for implementation strategies.
13	**BPA** Pg. 8 **Staff Report** Pg. 72-73 Section 9.7.1 Bullets	WLA compliance monitoring	It is not clear what is meant by the statement that monitoring frequency will increase from monthly to weekly or more after the first implementation phase. The reader could ask "Does this apply only for the specific reach or segment being addressed by the implementation phase, or for the entire river?" The statement should be clarified to state that monitoring frequency for each segment/trib is independent of the other segments/tribs, increasing after the first waterbody-specific phase.
14	**Staff Report** Pg. 72-73	WLA compliance monitoring	The Staff Report should not be overly prescriptive and require weekly monitoring after the first phase. The WQOs may change over the next decades, and weekly frequency may no

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	Section 9.7.1 Bullets		longer be relevant. Instead, the CMP should simply require that monitoring be increased "to a frequency sufficient to evaluate attainment of water quality standards". The Regional Board approves the CMP. For reference, this language is included in the final Technical Report section for Monitoring (Section 8).
15	**BPA** Pg. 8 **Staff Report** Pg. 73 Section 9.7.1 Last paragraph in section	Agencies potentially responsible for in-stream sources (WLA Responsible Parties)	Not every party responsible for WLAs and particularly LAs may have a discharge permit and corresponding requirements in place. For example, Army Corps and LA County Flood Control are not categorized as MS4s in this TMDL, and thus do not appear to have monitoring requirements, even though they are owners and maintainers of the impaired waterbody (i.e., the compliance monitoring section appears to be directed exclusively at MS4s). Is this the intent? Please explain how the monitoring requirements for non-MS4 parties responsible for WLAs and LAs parties are compatible with the TMDL requirements for the MS4 dischargers. It should be clear in the document that actions to control in-channel sources (e.g., sediments) would be the responsibility of the owner and/or maintainer of the impaired waterbody as has been done in other TMDLs. Two responsible agencies include the Army Corps of Engineers and Los Angeles County Flood Control District.
16	**BPA** Pg. 10-12 Table 7-39.5	Agencies potentially responsible for upstream sources. (WLA responsible parties)	Bureau of Land Management, CA Parks & Rec, National Park Service, and US Forest Service are listed in the Table of responsible parties as WLA responsible parties, but throughout the BPA (and in the Staff Report), they are noted as LA responsible parties. Please clarify. Please also explain their responsibilities for meeting the allocations. Are they required to conduct or support compliance monitoring efforts or Implementation actions? Ideally, any monitoring would have the same monitoring frequency as in-channel monitoring of the LA River segments and tributaries, to ensure targets and allocations are being met and that no contaminated discharge is being passed to MS4 lands.
17	**BPA** Pg. 13-18 Table 7-39.4 **Staff Report** Pg. 68-70 Table 9-5	Unnecessary to overprescribe MS4 implementation schedule	The rows specific to "Complete Implementation" of the LRS schedule tables should be removed from the Staff Report and BPA. In order to provide flexibility to MS4s with regards to monitoring and BMP implementation, the schedule should only specify the date on which LRS completion and WLA attainment must be <u>demonstrated</u>. By removing this unnecessary row/milestone, the MS4s will have the flexibility to perform and assess implementation actions such that it provides additional time to focus on actions. For instance, MS4s could spend less time monitoring and more time installing BMPS. See the marked-up BPA in Attachment 3 for recommended approach.

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18	**BPA** Pg. 13-18 Table 7-39.4 **Staff Report** Pg. 68-70 Table 9-5	LA milestones	Where are the implementation milestones for the parties responsible for LAs? These parties are only mentioned in the last two items, to "achieve final LAs" for dry and wet weather. Are the parties responsible for LAs required to submit and monitoring and implementation plans? If so, do they have interim allocations and/or milestones?
19	**BPA** Pg. 13-18 Table 7-39.4 **Staff Report** Pg. 68-70 Table 9-5	Final WLA compliance milestones	MS4 and Caltrans permittees should not be solely responsible for meeting final WLAs at interim milestones (such as at the end of each implementation phase for a segment). There are many factors that attribute to exceedances in the channel itself outside of MS4 and Caltrans discharge, as the TMDL alludes to, such as other permittees and other nonpoint sources. The final WLA and LA compliance milestones need to be synced so that all efforts culminate to one point and compliance can actually be met through a simultaneously coordinated effort as final WLAs cannot be met in the channel by MS4 and Caltrans efforts alone.
20	**Staff Report** Pg. 1 Section 1 Paragraph 3	Clarification of BSI Study	Please revise sentence to be consistent with the BSI study "This study sampled <u>every flowing</u> storm drain….."
21	**Staff Report** Pg. 1	Clarification of CREST	Please include the following: This TMDL and Staff Report are based on the original work conducted by the "Cleaner Rivers through Effective Stakeholder-led TMDLs" (CREST) stakeholder group, a stakeholder effort initiated by ~~the~~ <u>an MOU between the Regional Board, USEPA, and the</u> City of Los Angeles for the purpose of developing TMDLs to restore and protect water quality in the Los Angeles River.
22	**Staff Report** Pg. 1	List of tributaries addressed	The list of tributaries assigned allocations in the TMDL is incomplete (missing Bull Creek and Burbank Western Channel).
23	**Staff Report** Pg. 4	Clarification	Please revise the following sentence to be consistent with the study referenced: A Santa Monica Bay study (Haile et al., 1999) found swimming in urban runoff-contaminated <u>marine</u> waters resulted in an increased risk of chills, ear discharge, vomiting, coughing with phlegm and ~~significant~~ respiratory diseases.
24	**Staff Report**	Clarification	Please revise the following sentence to provide a description of the River: From this point

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	Pg. 5		the river flows east through concrete, trapezoidal channel to the Sepulveda Flood Control Basin at Balboa Blvd and is designated as Los Angeles River Reach 6.
25	**Staff Report** Pg. 5 Section 1.2.1 2nd paragraph	Bull Creek location	The Staff Report (and also previous Los Angeles River TMDL Staff Reports) incorrectly states that Bull Creek is in Reach 6, which is defined as the headwaters to Balboa Blvd. Bull Creek is actually in Reach 5, as it flows into the Sepulveda Flood Control Basin downstream of Balboa Blvd. Please fix.
26	**Staff Report** Pg. 6	Clarification	Please revise the following sentence to provide a description of the River: Reach 4 of the Los Angeles River is within a concrete box channel and runs from the Sepulveda Dam to Riverside Drive.
27	**Staff Report** Pg. 6	Clarification	Please revise the following sentence to provide a description of the River: While Reach 3 upstream of the Narrows is concrete box channel, The river bottom in ~~this area~~ the Narrows is unlined because historically groundwater routinely discharges into the channel~~,~~. The groundwater discharges in varying volumes depending on the height of the water table, maintaining year-long flow at the downstream end of the river.
28	**Staff Report** Pg. 6	Clarification	Please revise the following sentence to provide a description of the River: Reach 2 of the Los Angeles River is a concrete trapezoidal channel and runs from Figueroa Street to Carson Street. In this reach, the LA River flattens and there exist some sections with large swaths of deposited sediment.
29	**Staff Report** Pg. 6	Clarification	Please revise the following sentence to provide a description of the River: During storm events, Rio Hondo flow that is not used for spreading, reaches the Los Angeles River, though in some cases runoff is channeled to the San Gabriel River.
30	**Staff Report** Pg. 6	Clarification	Please revise the following sentence to provide a description of the River: In this reach, the channel has a soft bottom with concrete-lined trapezoidal sides.
31	**Staff Report** Pg. 7 Figure 1-2	Reference to 303(d)-listed reaches	The legend should specify these are the 303(d)-listed reaches for REC/bacteria WQOs.
32	**Staff Report** Pg. 10 Section 1.2.4	Area of wetland habitat	likely should say "19.82 **square** miles"

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	Paragraph 2		
33	**Staff Report** Pg. 10	Description of LA River Habitat	Please include a discussion of the habitat provided by the LA River to shorebirds and migratory birds as described by the Audubon Society. The habitat provided by the River to such birds is an important consideration and may affect sources of bacteria to the River. See the CREST Source Assessment Appendix for additional information.
34	**Staff Report** Pg. 12 Section 2 Paragraph 1	LAR is "highly contaminated by fecal pollution"	"bacterial pollution" would be a more accurate and appropriate term since the fecal pollution is inferred from the bacteria levels (which may be non-fecal) rather than actual fecal matter measurements.
35	**Staff Report** Pg. 12	Limits on recreational use	Please include the following sentence for additional clarification on the limits on recreational uses: This severely limits the potential for recreational uses of the river. Restricted access to the channels of the LA River and its tributaries also limits recreational uses.
36	**Staff Report** Pg. 13 Table 2-3	High flow suspension	Please incorporate information related to high flow suspension (HFS) into Table 2-3 so that it is clear which reaches and tributaries have uses suspended during HFS conditions.
37	**Staff Report** Pg. 16	Clarification on forthcoming bacteria objectives BPA	The update of bacteria objectives will remove the REC-1 fecal coliform objectives and use *E. coli* objectives as the sole REC-1 objective for freshwaters.
38	**Staff Report** Pg. 18	Clarification on exceedance frequencies	Please revise the following sentence to clarify how exceedances are evaluated in terms of allowable exceedances: The data are expressed in terms of exceedance ~~days~~ rate of the Basin Plan REC-1 water quality objectives. Exceedance ~~days are~~ rate is a ratio of samples in which measured bacteria densities exceed bacteria water quality objectives for the REC-1 beneficial use.
39	**Staff Report** Pg. 21	Future consideration of Natural Sources Exclusion Approach	The Staff Report indicates that there is insufficient data to quantify all naturally-occurring sources of indicator bacteria to support a Natural Sources Exclusion Approach at this time. Please add a statement to indicate that if interested parties develop sufficient data to support a Natural Sources Exclusion Approach it will be considered by the Regional Board during a reopener of the TMDL Additionally, please add an optional special study related to quantify all naturally-occurring sources of indicator bacteria into the Special Studies section of the TMDL and the BPA.

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40	**Staff Report** Pg. 22 Section 4 Paragraph 1	Sources of bacteria	Staff Report states sources of bacteria as: "…but are not limited to, domestic pets, horses, direct human inputs all contributing to the bacteria in the urban runoff, leaks and overflows from wastewater collection systems, illicit connections, failing septic systems, and sediments." Please also acknowledge non-anthropogenic sources such as birds, wildlife, vegetation, sediment, and unknown sources. Additionally, please further explain whether these sources would be considered natural or not and clarify whether sediment sources would constitute a natural or anthropogenic source.
41	**Staff Report** Pg. 23	Point vs. nonpoint sources	The Staff Report states: "However, the regulatory distinction between point and nonpoint sources is blurred in the Los Angeles Region." The rest of the paragraph discusses types of anthropogenic sources and natural sources but then states that the indicators cannot distinguish between the two. The distinction between nonpoint and point sources is a regulatory issue, not an analytical issue. If the lines are blurred in the Los Angeles Region, then the line is blurred because of policy decisions. How can MS4s implement a TMDL, or specifically demonstrate compliance with a TMDL that has in-stream WLAs, if the Regional Board cannot distinguish between sources?
42	**Staff Report** Pg. 23-24	Number of MS4 permits is inconsistent	Table 4-1 lists two municipal dischargers, but the text below and Table 4-2 list three MS4 dischargers. Please clarify in Table 4-1 that Caltrans is considered a municipal discharger.
43	**Staff Report** Pg. 24 Section 4.1.1 Paragraph 2	Ackerman et al., 2003 found storm drains contribute 90% of *E. coli* in LA River	This statement is outdated and information from the BSI Study is more accurate and relevant. The SCCWRP snapshots measured point source loading rates into the River, and then categorized those inputs as "storm drain" or "WRP." Tributaries were incorrectly categorized as storm drains. In contrast, the BSI Study used a mass balance approach to quantify the relative contributions of both point and non-point inputs. As such, the Regional Board should balance the shortcomings of the results of the 2003 study by acknowledging the more comprehensive approach and scientific findings of the CREST BSI study.
44	**Staff Report** Pg. 24	Clarification	Please revise the following sentence to be consistent with the study referenced: Ackerman *et al.* found that storm drains contribute roughly 13% of the flow <u>discharged by point sources to</u> the Los Angeles River in dry weather, while WRPs contribute roughly 72% of the flow <u>discharged by point sources</u> during dry weather. With this flow, storm drains were

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			contributing almost 90% of the *E. coli* loading from point sources (Ackerman *et al.*, 2003). Recommend adding a following sentence after the sentence above: "The BSI Study found that non-point, in-channel sources contributed *E. coli* loading rates equal to or greater than point source inputs along certain segments."
45	**Staff Report** Pg. 24	Citation and clarification needed	The Staff Report states: "While there are many sources of indicator bacteria to the MS4, the MS4 is the principal source of bacteria to the Los Angeles River in both dry weather and wet weather." Please include a citation/reference for this statement. Further, based on the BSI Study, please clarify that MS4s may be the principal point source of *E. coli* to the River, but non-point, in-channel sources of *E. coli* were often found to be responsible for a majority of *E. coli* that impacts the LA River.
46	**Staff Report** Pg. 24	Clarification	Please revise the following sentence to be consistent with the study referenced: The study also found that agricultural, industrial, and horse recreational land uses had the highest indicator bacteria concentrations observed though all land uses (including open space) had concentrations well above the water quality objectives.
47	**Staff Report** Pg. 25	Definition of major NPDES discharger/permit	What is the definition of a major NPDES discharger? Please include in the Staff Report.
48	**Staff Report** Pg. 25 and 27	Clarification of significance of sources for which no data are available	The Staff Report states: "Neither discharger is required to monitor for bacteria in their current permit and are not known to be a significant source of bacteria to the watershed." Without data, it is not possible to ascertain if the two major NPDES dischargers (non-WRPs) are or are not a significant source of bacteria. Please modify language to state that it is **unknown** if these dischargers are significant sources of bacteria to the watershed rather than they **are not known** to be significant sources of bacteria. Clarification is also needed in section 4.1.4.
49	**Staff Report** Pg. 25 and 26	Clarification of Tillman discharges	The Staff Report States discharge rates in million gallons per day for the Tillman, LA Glendale, and Burbank WRPs. Are these dry weather, wet weather, or design flow rates?

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			Please clarify.
50	**Staff Report** Pg. 26	Define minor NPDES discharger/permit	What is the definition of a minor NPDES discharger? Please include in the Staff Report.
51	**Staff Report** Pg. 27 Section 4.2 Paragraph n/a	Open space and undeveloped land not fully acknowledged	The reference site in Arroyo Seco is just one of many natural sites that influence with quality of LA River tributaries. Data from this one site should not be used to rule out impacts by natural flows across the entire watershed.
52	**Staff Report** Pg. 28	Clarification	Please revise the following sentence to be consistent with the study referenced: A variety of analyses were used by the BSI Study and its Technical Advisory Committee (TAC), which included academic experts on bacterial contamination, to assess and rank the potential causes of in-channel *E. coli* sources along Reach 2, as follows:
53	**Staff Report** Pg. 28 Section 4.2.4 Paragraph 1	in-stream bacterial inputs list	Please revise the following sentence to be consistent with recent studies on bacterial contamination at Long Beach: Regrowth or resuspension of sediment- or vegetation-associated bacteria.
54	**Staff Report** Pg. 30	Clarification	Please revise the following sentence to be consistent with the study referenced: With this flow, storm drains were contributing almost 90% of the *E. coli* loading from point sources (Ackerman *et al.*, 2003).
55	**Staff Report** Pg. 30	Clarification	Please revise the following sentence to be consistent with the study referenced: The study also found that ~~some~~ the majority of *E. coli* loading in Reach 2 could not be attributed to the measured storm drain inputs. Using Monte Carlo simulations, it was estimated that *E. coli* loading from non-point, in-channel sources was over 40 times greater than loading from storm drains.
56	**Staff Report** Pg. 30	Clarification	Please revise the following sentence: The loading rate units and allocation units are in the bacterial ~~concentration~~ discharge units of MPN/day.
57	**Staff Report** Pg. 36	Clarification	Please revise the following sentence: The flow duration curve was multiplied by the water quality objective for *E. coli* to calculate the allowable instream loading in MPN/day.
58	**Staff Report** Pg. 36	Clarification of interim WLA compliance	The description of interim WLAs should be clarified. The *E.coli* loading rates correspond to loading rates from all drains along a segment or tributary. They are measured end-of-pipe,

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	Section 6.1 Last paragraph		not in-stream.
59	**Staff Report** Pg. 37	Load allocations are unclear	It is unclear whether there is a difference in allocations between different non-point sources. Please clarify if there is a difference in load allocations for OWTS and non-MS4 lands.
60	**Staff Report** Pg. 37	Load allocations are unclear	How does an individual discharger assigned a load allocation know if they are complying with an exceedance day allocation? Please clarify what the meaning of an exceedance day is for such a discharger. Exceedance days are normally assigned to in-stream locations.
61	**Staff Report** Pg. 38	Clarification	Please clarify the sentence as follows: Monitoring data from October 2005 to May 2007 were used to determine the exceedance probability of the reference system for dry and wet weather. Samples were identified as dry or wet weather samples ~~using rainfall data from LAX~~ based on local weather conditions and the 0.1" wet weather definition discussed herein.
62	**Staff Report** Pg. 39 Section 6.2.6 Paragraph last	Acknowledging minimally impacted sites in reference study	Thank you for acknowledging that two sites were removed from the reference study. The reason for removal and circumstances of removal should also be mentioned here since SCCWRP and their designated scientific technical review panel did not propose their removal in the final version of the research study paper published in 2008.
63	**Staff Report** Pg. 40	Clarification	The following is inaccurate: "Where ECC is the estimated number of exceedance days under the critical condition and P(E)i is the average probability of exceedance for any site.[end of Sentence 1] The average exceedance probability is appropriate, since the weekly sampling is systematic and the rain events are randomly distributed; therefore, sampling will be evenly spread over the dry weather and wet weather events (i.e., the rain day, day after, 2nd day after, 3rd day after) [end of Sentence 2]." No averages were utilized. The word "average" in the first sentence should be replaced with "observed". Also, the second sentence should be deleted as it is incorrect and, again, averages were not utilized.
64	**Staff Report** Pg. 41 Equation 6.2	Calculation should be based on number of wet days	The calculation of exceedance days during wet weather does not make sense and should be based on the ratio of monitored wet days to actual wet days rather than the total number of days in the year. Please revise. See the final version of the Targets section of the Technical Report for further clarification.
65	**Staff Report** Pg. 40-41	Formatting	Suggest editing the formatting of pages 40-41 so that the equation does not break across pages.

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Detailed Comment #	Document Reference: (Doc., Section, Pg. #, Paragraph #)	Issue	Comments
66	**Staff Report** Pg. 42	High Flow Suspension clarification	The effect of HFS on exceedance days should be clarified with a footnote. Suggested language: The allowable number of WQO exceedance days is fixed from year-to-year and independent of the annual number of days on which the HFS applies. The WQO does not apply during the HFS.
67	**Staff Report** Pg. 45 onward	Formatting	The header and sub-header positions and font sizes are not consistent. Please modify.
68	**Staff Report** Pg. 46	Wet Weather Structural BMPs, Regional BMPs in particular	Of the BMPs listed, it is unlikely they would be able to handle the flow volumes needed to treat stormwater. In an urbanized watershed that has been designed to drain very quickly into the river, flow rates are such that these BMPs most likely are not able to treat such high volumes of water on a regional scale. Given that the Regional Board indicates the wet-weather TMDL is achievable through use of BMPs, the TMDL should clearly identify and provide support for the effectiveness of the suggested wet-weather BMPs.
69	**Staff Report** Pg. 51 Section 9.4.1	Missing sources	In-channel sources are noted as a non-point source, but are not assigned any responsibility. Who is responsible for in-channel sources? Please identify the parties responsible for in-channel sources and the required implementation responsibilities.
70	**Staff Report** Pg. 51	Suggested Edit	Suggest editing the following sentence to provide clarity: "Point sources include water reclamation plants, general and individual industrial stormwater dischargers, individual wastewater dischargers, Municipal Separate Storm Sewer System (MS4) dischargers, and ~~among~~ other dischargers **subject to NPDES permits**."
71	**Staff Report** Pg. 51	Subheadings appear to be incorrect	Section 9.4.2 is titled "Dry Weather Implementation for Point Sources" but each subsequent section (9.4.3, 9.4.4, etc.) are types of point sources. Seems that 9.4.3 should be 9.4.2.1.
72	**Staff Report** Pg. 52	Clarification on point of compliance	The Staff Report states: The interim WLA are expressed as the maximum *E. coli* load in MPN per day. The final WLAs are expressed as exceedance days of the numeric targets measured in the receiving water (i.e. river segment or tributary). Load allocations are assigned as exceedance days; however, there is no specification regarding the point of compliance being the receiving water. Are the exceedance days different for LAs and WLAs? Please clarify if there is a difference and how final LAs are measured. In the receiving water, or end-of-pipe?

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73	**Staff Report** Pg. 52	How can exceedance days be allocated based on proportional drainage area?	The MS4 WLA is group based. However, if individuals or subgroups decide to develop and implement alternative implementation strategies, then the WLAs [exceedance days] are to be divided based on proportional drainage area. How would you accomplish a division based on proportional area for final WLAs, which are a unit of time?
74	**Staff Report** Pg. 53	LRS is based on mass-based WLAs	The following statement is confusing for agencies implementing LRSs: "the LRS must be designed to meet the final WLA expressed as exceedance days of the numeric targets in the river segment or tributary" The LRS is fundamentally based on MS4 loading rates from outfalls. The LRS approach described in the Staff Report and Technical Report does not include any type of in-stream modeling. The assumption is that attainment of the mass-based WLAs will result in attainment of the exceedance-day based WLAs. Please make this change: "the LRS must be designed to meet the **interim mass-based WLAs, which correspond to attainment of the** final WLA expressed as exceedance days of the numeric targets in the river segment or tributary" Throughout the Staff Report, it needs to be clear that mass-based WLAs are measured end-of-pipe. They are NOT measured in-stream. The in-stream loading rates will be much higher due to loading from upstream reaches and tributaries. The WLA loading rates only apply to MS4 discharges.
75	**Staff Report** Pg. 53	Suggested edit	The ~~LRS~~ dry weather MS4 LRS ~~dry weather implementation strategy~~ as described in ~~the following~~ this section establishes a stepwise and iterative process.
76	**Staff Report** Pg. 54	Reference does not make sense	The Staff Report states: "The downstream-based approach poses significant challenges, and may in fact not be feasible for any of the Los Angeles River segments or tributaries due to regulatory and/or engineering constraints, as described below." The text below lists alternatives but does not discuss challenges. Please include a discussion of the challenges. See Technical Report for information to support a discussion of the challenges.
77	**Staff Report** Pg. 54	Text revision necessary.	The Staff Report states: "A downstream-based approach could be considered "infeasible" according to any of the above criteria."

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			"Above criteria" refers to a list of components to consider. The components are not developed as criteria, just elements that should be considered. The sentence should be modified to state that "If an evaluation of any of the components above result in a finding of infeasibility, then the proposed downstream-based approach may therefore also be considered infeasible." See Technical Report for information to support a discussion of the challenges.
78	**Staff Report** Pg. 55	Edit to sentence	Delete the "s" from "MS4s" in the following sentence: "The regulatory and public acceptability components are likely the biggest hurdles for MS4~~s~~ Permittees that would pursue a downstream-based approach."
79	**Staff Report** Pg. 56 Text below Figure 9-1	Formatting	Please insert a page break to move this text to the next page, or it might be missed by the reader.
79	**Staff Report** Pg. 62 Priority 1 Part 3	Special Studies	The Staff Report states: In addition, early reduction of MS4 bacteria discharges to segment B/Reach 2 will provide a better starting point for concurrently conducting optional special studies to more fully characterize all sources within this segment. Please add a statement to indicate that if interested parties develop sufficient data to support a Natural Sources Exclusion Approach it will be considered by the Regional Board during a reopener of the TMDL. Additionally, please add an optional special study related to quantify all naturally-occurring sources of indicator bacteria into the Special Studies section of the TMDL and into the BPA.