



California Regional Water Quality Control Board

Santa Ana Region



3737 Main Street, Suite 500, Riverside, California 92501-3348
Phone (951) 782-4130 • FAX (951) 781-6288
www.waterboards.ca.gov/santaana

Linda S. Adams
Acting Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

March 30, 2011

Mr. Granville M. Bowman
San Bernardino County Stormwater Program
825 East Third Street
San Bernardino, CA 92413-0835

SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD COMMENTS ON THE DRAFT COMPREHENSIVE BACTERIA REDUCTION PLAN; ORDER R8-2010-0036, NPDES NO. CAS618036, SECTION V.D.2.b.

Dear Mr. Bowman:

We have received your letter, dated December 31, 2010, transmitting the Draft Comprehensive Bacteria Reduction Plan (draft CBRP). The draft CBRP was submitted in accordance with Section V.D.2.b of Santa Ana Regional Board Order No. R8-2010-0036, NPDES No. CAS618036 (MS4 permit). We have reviewed the draft CBRP and find that additional information is needed prior to Regional Board consideration of approval of the CBRP. Please submit a revised CBRP addressing the issues described below.

Overarching Comments

We recognize the significant efforts the MS4 agencies have made to comply with MS4 permit and Middle Santa Ana River bacteria indicator TMDL (MSAR TMDL) requirements and to develop and submit the draft CBRP. Overall, we believe that the draft CBRP identifies appropriate *potential* mechanisms to address bacterial indicator management. However, the draft CBRP fails to identify a specific plan and schedule to implement one or more of these mechanisms, apart from certain measures explicitly required by the MS4 permit (e.g., activities related to illicit discharges (IDDE program)). This is contrary to our expectations, which we had discussed during the development of the MS4 permit; it is also contrary to the explicit requirements of the MS4 permit itself. Section V.D.2.b provides the method by which the Final WQBELs for MSAR TMDL Bacterial Indicator TMDL under dry weather conditions should be developed and implemented. This includes the option to submit and implement a CBRP that describes, *in detail*, the specific actions that have been taken or will be taken to achieve compliance with the urban wasteload allocation under dry weather conditions by December 31, 2015 (the compliance date specified in the MSAR TMDL, as incorporated into the Water Quality Control Plan (Basin Plan)). (Sec. V.D.2.b. i.) The MS4 permit also specified the items that must be included in the CBRP. (Sec. V.D.2.b.i. a-j) These include the scientific and technical documentation used to conclude that the CBRP, once fully implemented, is expected to achieve compliance with the urban wasteload allocation for indicator bacteria by December 31, 2015. (Sec. V.D.2.b.i.(e))

In contrast, the draft CBRP largely identifies a plan to develop plans, i.e., a plan to evaluate various potential bacteria reduction mechanisms, with the development of more specific implementation plans contingent on the results of those evaluations and other

California Environmental Protection Agency



considerations, including financial feasibility. While scientific and technical evidence is provided in Section 6 of the draft CBRP regarding the expectation that the urban wasteload allocation will be met, this evidence is based solely on hypothetical implementation of the potential mechanisms identified in the draft CBRP, rather than actual analysis of the expected effect of specific measures proposed to be implemented.

While we understand and appreciate the need for an adaptive approach, we believe that there has been adequate time since the approval of the TMDLs in 2005 to complete most if not all of the requisite evaluations, such that a specific program of actions should now be identifiable. Accordingly, the CBRP must identify these actions, and commitments to implement them, before Board staff can recommend its approval. This is particularly true given the regulatory significance of the CBRP: as you are aware, under the terms of the MS4 permit (Section II.F.13.c.vii), in the absence of an approved CBRP, the WLAs identified in the permit become the final numeric water quality-based effluent limits that must be achieved by December 31, 2015. To fulfill its performance-based, alternative role, the CBRP cannot simply identify a plan to develop plans; it must describe, in detail, the specific actions that have been taken or will be taken to achieve compliance with the urban wasteload allocation under dry weather conditions.

Additionally, it is important to clarify or correct the language in Section 1.2.2 regarding the applicability of the CBRP, and in Section 1.2.3 regarding compliance with the urban wasteload allocations. The first bullet item in Section 1.2.2 states that the CBRP is designed to mitigate, *to the maximum extent practicable (MEP)*, controllable urban sources of bacterial indicators that cause non-attainment of water quality objectives. [Emphasis added.] Likewise, Section 1.2.3 of the CBRP states, “[t]his CBRP is designed to achieve compliance with the dry weather urban wasteload allocation *to the MEP* by December 31, 2015.” [Emphasis added.] These references to MEP are extraneous and inconsistent with the clear permit terms. The MS4 permit requires compliance with the Final WQBELs no later than December 31, 2015. The Final WQBELs may be the development and implementation of a CBRP that will achieve compliance with the urban wasteload allocations under dry weather conditions, not compliance with the urban wasteload allocations to the MEP. (Obviously, the draft CBRP you have submitted is intended to fulfill this requirement.) Alternatively, if the CBRP approach is not completed in a timely manner, the urban wasteload allocations for dry weather conditions become the final numeric WQBELs. In either case, the MS4 permit expectation is that these WQBELs will be met by December 31, 2015.

Finally, we are concerned about language in the draft CBRP (e.g., Section 1.2. Applicability, first bullet) that refers to “watershed-wide compliance sites”. We recognize that a Regional Board approved watershed-wide monitoring program is in place and is intended to provide information concerning compliance with bacterial indicator objectives in the receiving waters. We also understand that, as a practical matter, it is infeasible to monitor receiving water compliance at every point in the watershed and that it is therefore reasonable and appropriate to identify specific sites where compliance will be assessed. However, the language in the first bullet (Bacteria Indicator Sources) could be read to indicate that the CBRP will be designed to address controllable bacterial indicator sources that cause non-attainment of bacteria objectives *only* at the watershed-wide compliance sites. It should be acknowledged that the expectation is that measures will be implemented to assure compliance with applicable objectives throughout the watershed.



While we believe that substantive revision of the draft CBRP is needed to fulfill the applicable MS4 permit requirements described above, we offer the following specific comments on the draft CBRP, which may be helpful in making the needed revisions.

Specific Draft CBRP Comments

1. The approach for compliance proposed in the draft CBRP assumes that all required regulatory agencies will adopt the recommendations for changes to recreation standards developed by the Storm Water Quality Standards Task Force (SWQSTF), including changes to bacterial indicator water quality objectives, and removal of REC1 and/or REC2 designations for specific waters through use attainability analyses (UAAs). However, whether and to what extent changes to the recreation standards will be adopted is not certain. The draft CBRP should identify the actions that will be taken to assure standards compliance if changes to recreation standards are not approved.
2. Section 5.2.1 of the draft CBRP describes the use of water conservation and pathogen control ordinances as management practices that may help reduce dry weather flows (DWFs) and thus bacterial indicator levels in impaired water bodies. However, the draft CBRP did not include a clear commitment to adopting specific ordinances or providing funding for enforcement of these ordinances. The draft CBRP should identify obstacles to the adoption of specific ordinances, a schedule for consideration of adoption of these ordinances, and a clear commitment to support and fund enforcement of these ordinances, when and if approved. In addition, please indicate how the effects of these ordinances will be measured and a schedule for collecting such measurement data.
3. Section 5.2.2.1 of the draft CBRP indicates that there are two essential questions that need to be evaluated prior to fully engaging in a process that involves eliminating transient camps. However, the questions are not explicitly stated. Please clearly state the questions and how their answers will be used to shape this draft CBRP element.
4. Section 5.2.2.2 of the draft CBRP describes development of an illicit discharge, detection, and elimination program in accordance with MS4 permit requirements. However, other than development of the program, the draft CBRP did not indicate who would be conducting inspections nor did it provide specific details regarding specific goals and objectives for the program (i.e., number of inspections per given time period, length of water body per inspection, etc.). Please provide this information.
5. Section 5.2.2.3 of the draft CBRP indicates that existing street sweeping programs will be evaluated and that a plan and schedule for a revised program will be developed based upon the evaluation. A summary of street sweeping activities (number of curb-miles) in San Bernardino municipalities was provided for the years 2005-09. However, contextual details regarding existing street sweeping activities were not provided. Please provide the total number of curb-miles for each municipality, the number of curb-miles that are swept on a regular basis, and the



- frequency of street sweeping activities. In addition, please indicate what will be done for the remaining un-swept curb-miles and a specific schedule for full implementation of the updated street sweeping program.
6. Section 5.2.2.4 of the draft CBRP describes development of a Residential Program to evaluate irrigation and water conservation practices. However, specific goals and objectives for the program were not provided. Please provide specific numeric goals and objectives for the irrigation and conservation practices described in the CBRP. In addition, the draft CBRP discusses landscape irrigation audits; however, it does not include evaluating the outcome of such audits or applying the results to the implementation of specific management measures. Since the draft CBRP states that irrigation audits are highly effective, the permittees should identify a specific commitment to follow up on irrigation audits.
 7. Section 5.2.2.6 of the draft CBRP describes development of a septic system inventory and program. However, specific details for this program were not provided. Please provide a schedule for completion of the septic system inventory and mapping tasks. In addition, please indicate how public education and its effectiveness regarding septic systems will be measured. Also, please indicate goals and objectives for septic system inspections (e.g., describe how many septic system inspections will be completed per given time period, specific steps of the inspection process, etc.).
 8. Section 5.2.3 of the draft CBRP attempts to address the requirement to include the specific inspection criteria used to identify and manage urban sources of bacterial indicators. However, the information provided does not clearly describe the inspection criteria or specific details of the inspection program. Please indicate the following regarding the inspection program:
 - A. The questions that will be answered by performance of inspections and controllability assessments
 - B. The number of inspections that will be completed during given time periods
 - C. Personnel assigned to perform inspections
 - D. The specific components or steps of an inspection
 - E. The criteria affecting decisions and completion of specific inspection steps
 - F. Please provide additional background information regarding inspection nodes.
 - G. Please explain the extent to which MS4 inspections will be able to locate transient encampments.

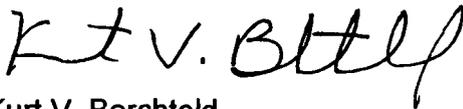
9. Many actions are considered in Section 5 of the draft CBRP. This section should also include descriptions of specific activities designed to measure reductions in bacterial indicators and DWF, and identify specific reductions expected to be achieved following implementation of key CBRP elements by specific dates.
10. Section 5 of the draft CBRP should describe what additional actions will be taken to achieve TMDL targets by 2015 if the 2014 Annual Report shows that the estimated reductions in Section 6 are not being realized and/or monitoring data demonstrate that the water quality objectives and/or urban wasteload allocation is not being met.
11. The draft CBRP states that preparation of use attainability analyses (UAAs) will be included in the inspection program (pg. 5-11), that completion of UAAs will be implemented in parallel with source evaluation activities (pg. 5-11), and that UAAs are incorporated into the inspection program (pg. 5-25). Please provide clarification and specific details regarding the intent of these statements.
12. Many sections of the draft CBRP discuss hydrologic disconnection; however, hydrologic disconnection is not clearly defined. Please include a clear definition of hydrologic disconnection. Furthermore, considering that a significant portion of the compliance approach within the draft CBRP relies upon the assumption of hydrologic disconnection of water-bodies and sub-watershed areas within the MSAR watershed, the inspection strategy must include clear determinations and validation of hydrologic disconnection.
13. Section 6 contains an analysis to demonstrate the potential for the types of actions proposed in the draft CBRP to result in TMDL compliance. However, the draft CBRP does not provide requisite specifics regarding the numbers, types, locations or schedules of the actions that will actually be implemented. In short, Section 6 provides a theoretical analysis. As stated in our overarching comments, what is required of the CBRP is a specific plan and schedule for actions that will result in compliance with the urban wasteload allocation. .
14. Section 6.1 on page 6-1, the draft CBRP states that an analysis used the 5-sample/30-day Logarithmic Mean for *E. coli* and that several key questions were addressed to complete an analysis. Please identify which analysis is being addressed and describe the details of the analysis.
15. In Section 6 of the draft CBRP, discrepancies were found in reference to tables and figures in the section.
 - A. On page 6-4, the draft CBRP states that typical DWF is shown in column 2 of Table 6-3, however, this column contains the Numeric Target in terms of daily bacteria load (billion cfu/day).
 - B. On page 6-4, the draft CBRP states that DWF rates per acre of urbanized drainage area are depicted in column 3 of Table 6-1; however, this column actually lists sites where data are available for characterization of baseline flow and bacterial indicators.

- C. On page 6-8, the draft CBRP states that Figure 6-3 shows large amounts of unaccounted-for bacterial indicators; however, Figure 6-3 (page 6-24) depicts the probability density function of the Monte Carlo simulation.
- D. Please provide units for the quantities listed in Table 6-8 Compliance Analysis Strategy.
- E. In Table 6-7 (page 6-18), for the column labeled *Drainage Area with Increased Street Sweeping*, please indicate the unit for the numbers contained in the column.
16. On page 6-4 of Section 6, the draft CBRP states that the presence of a non-urban source was determined to be responsible for the elevated DWF rates. Please describe how this determination was made.
17. Alternative 2 in Section 6 is stated to be the preferred method of determining compliance. However, Figure 6-1 shows the MS4/urban DWF to be significantly smaller relative to POTW and non-urban sources and Figure 6-2 also shows unaccounted for sources that appear to be more significant than MS4 sources in at least two watershed-wide locations. The unaccounted for sources do not appear to rule out unaccounted for urban sources. This information appears to assume that the MS4 sources may not be sufficiently significant to cause receiving water impairment. Please clarify what additional data will be obtained to demonstrate whether receiving water impairment is caused by the MS4 and that would then trigger the need for any bacterial source indicator reduction by the permittees. We understood the draft CBRP to be a BMP-based implementation plan to reduce bacterial indicators from urban sources. It's not clear how this alternative will demonstrate bacterial source reduction that will lead to compliance by 2015.
18. Please correlate area-wide projected reduction in Table 6-8 to probable reduction in the WLA compared to baseline or currently known levels at the watershed-wide monitoring locations and projected necessary reduction from MS4 sources (Table 6-3). These target reductions should be included in the milestones with associated metrics in Table 7-3. Also, please describe how projected reductions will be validated.
19. The draft CBRP contains a description of proposed bacteria reduction activities that will be implemented in accordance with the schedule proposed in Section 7. In addition, the draft CBRP states in Section 7 that progress towards implementing CBRP activities will be summarized and reported in the Annual Report, which is due by November 15 of each year. Rather than summaries, please include detailed descriptions of all CBRP activities, results, and conclusions completed each year. In addition, please indicate that the Annual Report will contain a comprehensive schedule of all CBRP tasks and activities planned to be completed during the year subsequent to each Annual Report.
20. Section 8.2 (page 8-1) of the draft CBRP states that the CBRP is not intended to address bacterial indicator impairments that arise from within the impaired waterbody. Please clarify the intent of this statement.

21. In Section 3.2 (pg. 3-9) and Section 6.2.1 (pg 6.2), the draft CBRP lists general sources of DWF. Please provide a brief description of each of these sources.
22. Please include implementation timelines in the Figure 8-1 CBRP implementation strategy.
23. If determination is made that MS4 discharges are not causing or contributing to receiving water impairment, this should be determined and reported in the 2014 Annual Report to allow regional board staff to redirect its efforts prior to the 2015 compliance date.

A final version of the CBRP addressing the comments described in this letter must be submitted to the Regional Board. Per the requirements of the MS4 permit (Sec. V.D.2.b.ii), the final version CBRP must be submitted no more than 90 days after receiving these comments. If you have any questions, please contact Hope Smythe at (951) 782-4493 or hsmythe@waterboards.ca.gov or William Rice at (951) 782-4459 or wrice@waterboards.ca.gov.

Sincerely,



Kurt V. Berchtold
Executive Officer

cc: Regional Board
Dan Ilkay, San Bernardino County Flood Control District, dilkay@dpw.sbcounty.gov
Mark Norton, Santa Ana Watershed Project Authority, mnorton@sawpa.org
Rick Whetsel, Santa Ana Watershed Project Authority, rwhetsel@sawpa.org
David Rice, State Water Resources Control Board, DavidRice@waterboards.ca.gov

