



19 May 2015

Rick Whetsel
Santa Ana Watershed Project Authority
11615 Sterling Ave.
Riverside, CA 92503

RE: Proposed Scope-of-Work for MSAR TMDL Task Force in 2015-17

Dear Mr. Whetsel:

Per your request, I have prepared the following preliminary scope of work and cost estimate to support the Middle Santa Ana River TMDL Task Force. As you directed, this cost estimate now covers TWO fiscal years: 2015-16 and 2016-17.

In the spring of 2015, U.S. EPA approved the Basin Plan amendment modifying water quality standards related to contact recreation. Consequently, the primary focus for the next two years will be on updating the Middle Santa Ana River Bacteria TMDL to be more consistent with the revised Basin Plan. Changing the TMDL requires a separate Basin Plan amendment. And, our recent experience has shown that such amendments require a great deal of effort from the stakeholders and considerable time for regulatory review and approval.

Nevertheless, successful implementation of the Comprehensive Bacteria Reduction Plan (CBRP) necessitates that the TMDL be revised and updated. In particular, the TMDL must now take into consideration:

- 1) The High Flow Suspension that occurs during and immediately after rain events.
- 2) The exception provided for uncontrollable natural sources (birds, wildlife, sediment, etc.)
- 3) Removal of the REC1 use from Cucamonga Creek - Reach 1 (a 303d-listed stream).
- 4) Adoption of antidegradation targets for E. coli concentrations in REC2-only streams.
- 5) Implementation of the new Regional Bacteria Monitoring Program
- 6) Approval of the CBRP as the primary strategy for achieving regulatory compliance.

In addition, the TMDL should be revised to distinguish between wet and dry "conditions" rather than wet and dry "seasons" as doing so would be more consistent with the new Basin Plan requirements related to High Flow Suspensions. It is important that this work be initiated before the specified date for Dry Season compliance takes effect on 12/31/2015. For that reason, the Task Force should prepare a formal petition requesting that the MSAR Bacteria TMDL be re-opened for review this calendar year. And, the Task Force should request that the Regional Board deem this effort a "high priority" during the forthcoming Triennial Review process.

In addition to updating the TMDL, there are two more tasks that must be completed during the next two years. In the spring of 2016, the Task Force must submit a written report describing progress-to-date in meeting the TMDL targets. And, in the latter half of 2016 the Task Force should be prepared to assist the Regional Board staff in preparing the Water Quality Assessment used to update the state's 303(d) list. Early engagement in this process may help avoid inappropriate listings and unnecessary TMDLs. A summary of key tasks and proposed schedule is shown in Table 1.

Table 1: Schedule of Tasks for 2015-17

#	Description	Timing
1	Facilitate Triennial Review (incl. petition to revise TMDL)	Summer, 2015
2	Facilitate proposed revisions to the TMDL	Fall, '15 - Summer, '16
3	Facilitate regulatory review process to approve TMDL revisions	Fall, '16 - Spring, '17
4	Facilitate preparation of 2015 TMDL Progress Report	Spring, 2016
5	Facilitate 2016 Water Quality Assessment (303d listing process)	Summer - Fall, 2016

As in the past, my role will be to serve as regulatory strategist and compliance expert for the Task Force. In that role, my foremost responsibility is to develop TMDL implementation strategies that assure compliance with the revised Basin Plan. Historically, the Task Force has also elected to contract with highly-qualified engineering firms to prepare key technical reports and CEQA documents. Risk Sciences will assist SAWPA staff in preparing the necessary RFPs and will continue to coordinate closely with contractors selected by the Task Force.

I estimate that meeting my responsibilities to the Task Force will require approximately 10 hours per month. The professional fee is \$315 per hour plus travel expenses. All other direct expenses (phones, postage, photocopies, etc.) are already included in the hourly fee. The total estimated cost, including travel for bi-monthly Task Force meetings, is shown in Table 2.

Table 2: Proposed Compensation for FY15-16 and FY16-17

Description	Amount
Professional Fees (240 hours * \$315/hr.)	\$75,600
Travel Expenses (12 trips * \$975/trip)	\$11,700
2-Year Total	\$87,300

Travel expenses are routinely shared among several different projects thereby reducing the cost to each individual client. The estimate for travel costs (shown in Table 2) is based on the historical average for previous work performed on behalf of the MSAR-TMDL Task Force.

The proposed scope-of-work and budget is much larger than our previous contract with the Task Force. Risk Sciences' role has been relatively small for the last few years as we waited for EPA and the State Board to approve the Basin Plan amendments. However, revising the TMDL and addressing issues related to the 303(d) listing process will required significantly greater effort than the prior Task Order for FY13-15.

I genuinely appreciate the opportunity to continue supporting the Middle Santa Ana River TMDL Task Force and look forward to working together for the next two years.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "T. Moore", with a long horizontal flourish extending to the right.

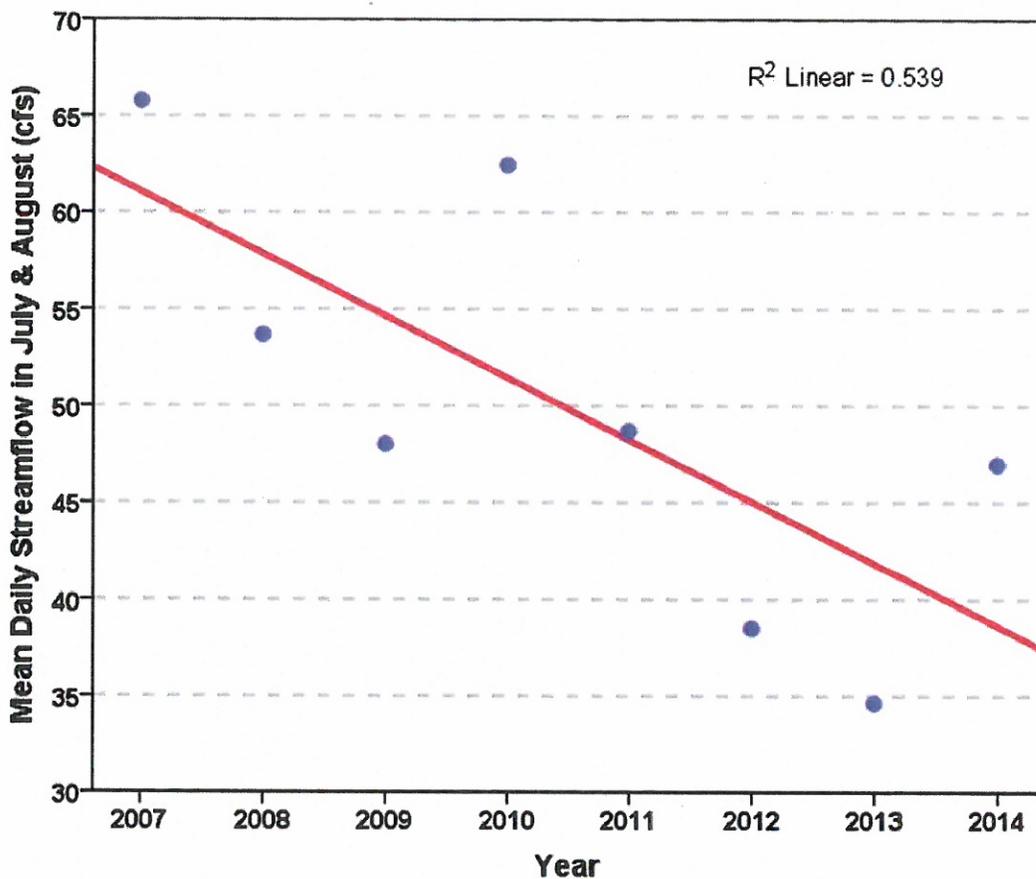
Timothy F. Moore, President

Risk Sciences
125 New Dawn Rd.
Rockvale, TN 37153

Office: 615-274-2745
Fax: 615-370-5188
Email: tmoore@risk-sciences.com



Santa Ana River - Reach 3 (MWD Crossing in July & August)



Summer baseflow decreased by 14 mgd (40%) in 8 years.

63 cfs = 34 mgd; 37 cfs = 20 mgd

June 15, 2015

Kurt V. Berchtold, Exec. Officer
Santa Ana Regional Water Quality Control Board
3737 Main St., Suite 500
Riverside, CA 92501-3348

RE: Petition to Reopen and Revise the Middle Santa Ana River Bacterial Indicator TMDL

Dear Mr. Berchtold:

Ten years ago, the Santa Ana Regional Water Quality Control Board ("Regional Board") adopted a Total Maximum Daily Load for Pathogen Indicator Bacteria in the Middle Santa Ana River Watershed (MSAR-TMDL).¹ Shortly thereafter, stakeholders named in the MSAR-TMDL formed a Task Force to develop a coordinated compliance strategy. Diligent implementation of these plans has significantly reduced bacteria loads from controllable sources throughout the watershed including the waterbodies named in the MSAR-TMDL.²

Just a few months after the CBRPs were approved, the Regional Board also revised many of the water quality standards related to primary and secondary contact recreation.³ U.S. EPA approved most of these Basin Plan amendments by letter dated April 8, 2015 and, as a result, the revised standards are now in full force and effect.

Some, but not all, of the Basin Plan amendments were anticipated when the MSAR-TMDL was originally adopted. For example, TMDL targets for pathogen indicator were specified as both fecal coliform bacteria and *e. coli* bacteria in expectation that the latter would replace the former when the Basin Plan was amended. This is precisely what came to pass.

¹ Res. No. R8-2005-0001; Aug. 26, 2005. Subsequently approved by the State Water Resources Control Board ("SWRCB") on May 15, 2006 (Res. No. 2006-0030), the Office of Administrative Law ("OAL") on Sept. 1, 2006, and U.S. EPA on May 16, 2007.

² Seasonal water quality monitoring reports are regularly submitted by the Task Force to the Regional Board.

³ Res. No. R8-2012-0001 (June 15, 2012). Subsequently approved by the SWRCB on Jan. 21, 2014 and OAL on July 2, 2014.

However, there were numerous other changes made to recreational water quality standards in the Basin Plan amendments that have not yet been integrated into the MSAR-TMDL. These changes have a profound effect on how compliance with the new bacteria objectives is defined and demonstrated. Among the most significant revisions are the following:

- 1) Cucamonga Creek - Reach 1, one of the 303d-listed streams identified in the MSAR-TMDL, is no longer designated REC1.
- 2) Obsolete water quality objectives for total coliform and fecal coliform have been deleted from the Basin Plan.
- 3) REC1 and REC2 uses, and the related water quality objectives, are temporarily suspended during certain high flow condition.
- 4) Bacteria from certain natural background sources (e.g. birds, wildlife, stream sediments, etc.) have been deemed "uncontrollable" loads.
- 5) The Single Sample Maximum (SSM) value is assigned based on a tiered risk-based system that varies with the intensity of recreational use.
- 6) A Regional Bacteria Monitoring Program has been established with special emphasis on waterbodies with high levels of recreational use.

In addition to the actual Basin Plan amendments, the Regional Board has also approved detailed Comprehensive Bacteria Reduction Plans (CBRPs) for Riverside County and San Bernardino County.⁴ The Municipal Separate Stormwater Sewer ("MS4") agencies named in the MSAR-TMDL are required to implement the CBRPs as a mandatory condition of their NPDES permits.⁵ This approach was used in lieu of adopting the TMDL's Urban Waste Load Allocation (WLA) as numeric effluent limits in the MS4 permit. However, full implementation of the CBRP is expected to achieve compliance with the Urban WLA for controllable sources.

In the decade since the MSAR-TMDL was first enacted, a great deal of new data has been developed. This information has fundamentally transformed our understanding of bacterial loads in the region. It is essential that the MSAR-TMDL be updated to reflect this new data and to ensure greater consistency with the revised water quality standards for recreational uses.

⁴ Res. No. R8-2012-0015 for Riverside Co. Res. No. R8-2012-0016 for San Bernardino Co. Feb. 10, 2012.

⁵ See page 61 of 117 in NPDES No. CAS 618033 (Res. No. R8-2010-0033) for Riverside County; See page 50 of 125 in NPDES No. CAS 618036 (Res. No. R8-2010-0036) for San Bernardino County. Both adopted Jan. 29, 2010.s

Revising the MSAR-TMDL will require considerable resources to ensure success. And, just as it did with the bacteria Basin Plan amendments, the Task Force is prepared to provide substantial technical and financial support for the project. As always, the Task Force will work closely with Regional Board staff in a collaborative public forum to expedite the effort.

By this petition, the members of the MSAR-TMDL Task Force respectfully request that the Regional Board formally initiate the process to reopen and revise the TMDL for Pathogen Indicator Bacteria in the Middle Santa Ana River Watershed. The Task Force is prepared to begin immediately and requests that effort be designated as a "High Priority" during the forthcoming Triennial Review process. A suggested timetable is presented below table:

Task	Description	Deadline
1	Annotated outline of the revised TMDL	Oct., 2015
2	First draft of the revised TMDL	March, 2016
3	Second draft of the revised TMDL	June, 2016
4	Final revised TMDL (incl. CEQA)	Sept., 2016
5	Regional Board hearing	Dec., 2016
6	State Board hearing	June, 2017
7	OAL review	Sept., 2017
8	EPA review	March, 2018

This is an aggressive schedule but the Task Force believes it is achievable because the TMDL is being revised to account for water quality standards changes or NPDES permit requirements that have already been approved. Moreover, it is important that any effort to update the TMDL be completed before the wet weather compliance deadlines take effect at the end of 2020.

Thank you for your consideration. The Task Force looks forward to continuing our productive partnership with the Regional Board to achieve are mutual goal of protecting water quality and recreational uses in the Santa Ana River watershed.

Respectfully,



EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Santa Ana Regional Water Quality Control Board

June 11, 2015

Ms. Nancy Woo
Acting Director, Water Division
U.S. Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION IX DECISION LETTER (APRIL 8, 2015) RE AMENDMENTS TO THE WATER QUALITY CONTROL PLAN FOR THE SANTA ANA RIVER BASIN TO REVISE RECREATIONAL STANDARDS FOR INLAND FRESH SURFACE WATERS IN THE SANTA ANA REGION

Dear Ms. Woo:

Thank you for your letter of April 8, 2015, providing U.S. Environmental Protection Agency (USEPA), Region IX approval/disapproval of specific elements of the subject amendments and the rationale for those decisions.

We have reviewed your letter carefully and find that there are a number of points that require clarification. We appreciate that the considerable magnitude and variety of the amendments required substantial USEPA time and effort to review and take these actions, and believe that the need for clarification likely stems from these circumstances.

The items requiring clarification are identified below.

1. Revisions to CHAPTER 3 (Beneficial Uses) of the Basin Plan; Additions of water bodies and associated beneficial uses to the Basin Plan (APPROVALS and BASES FOR APPROVALS)

- *Use of the term "Existing" (or "existing") vs "existing or potential"*

Table 3-1 of the Basin Plan lists the surface and ground waterbodies in the Region and assigns beneficial use designations appropriate for each waterbody using the letters "X" or "I". The amendments modified the definition of the term X used in this

WILLIAM R. JH. CHAIR | KAREN V. BERCHTOLD, EXECUTIVE OFFICER

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Table from "present or potential" to "existing or potential". ("I" is used to designate intermittent uses.)

The April 8, 2015 decision letter lists the approved additions of water bodies and associated beneficial uses to the Basin Plan. In referring to the approved "X" beneficial use designations for each water body, the term "Existing" is used, rather than "existing or potential".

Given the regulatory significance of the term "existing use", this description is not inconsequential. However, we do not believe that USEPA intended to confer "existing use" regulatory status in approving the designations. Certainly, the record shows that neither the Regional Board nor the State Water Board intended to do so.

Our understanding of USEPA's intent is based on text elsewhere in the April 8, 2015 letter (Revisions to water body reaches and associated beneficial uses, description of Temescal Creek) that recognizes that beneficial uses designations were modified for parts of this Creek from intermittent to *existing or potential*.

Once again, given the regulatory significance of the term "existing use" and the clear intent of the Water Boards, we request confirmation from you that USEPA approves the X beneficial uses designations for the waterbodies listed as "existing or potential uses". If USEPA is precluded by statute or regulation from approval of uses as "potential" but does not intend to confer "existing use" only status on the water bodies listed, then this must be clearly stated for the record.

2. Revisions to CHAPTER 3 (Beneficial Uses) of the Basin Plan; Revisions to water body reaches and associated beneficial uses (APPROVALS AND BASES FOR APPROVALS)

- *Cucamonga Creek Reach 1: removal of the existing beneficial use of REC1*

The approvals include the "removal of the existing beneficial use of REC1" for Cucamonga Creek Reach 1. Here, the concern described above about the regulatory significance of the term "existing" beneficial use becomes clear. Federal regulations provide that "existing uses" cannot be de-designated (unless a use requiring the application of more stringent criteria (water quality objectives) is specified).

We believe that here, and in other cases in which de-designation of the REC1 use is approved, the appropriate terminology would be "Removal of the present or potential (or existing or potential, to reflect the amendments) beneficial use of REC1". Or to use terminology comparable to that employed later in USEPA's letter (see item 3, below), simply "Removal of REC1".

3. Revisions to CHAPTER 3 (Beneficial Uses) of the Basin Plan (DISAPPROVALS AND BASES FOR DISAPPROVALS)

- *Disapproval of REC1 "exemption" from REC2: Santa Ana-Delhi Channel Reach 1; and,*
- *Disapproval of removal of REC2: Cucamonga Creek Reach 1 and Temescal Creek Reach 1b.*

The bases described in the April 8, 2015 letter for these disapprovals rest on concern about the protection of downstream uses and, it appears, on the fact that projects are not already in place and/or may be inadequate to assure such protection. As stated in your letter, USEPA believes that the REC2 designation, coupled with implementation of antidegradation targets, will ensure that monitoring and controls are in place to protect downstream REC1 uses.

We understand and agree with USEPA's concern about the protection of downstream waters, particularly where those waters are impaired and subject to TMDL requirements. As we have discussed with your staff, accompanied by submittal of relevant documentation, significant efforts are well underway to address pathogen indicator impairment in these waters via the development and expected, near-term implementation of various control measures, and through the development of a comprehensive pathogen indicator monitoring program, as specified in the amendments. Your April 8, 2015 letter identifies some of these measures.

It is important to point out that these actions are not contingent on, nor driven by, REC2 designations for these waters. Comprehensive bacteria reduction plans now being implemented in the Region are driven by the REC1 designations of the downstream waters. Both we and the responsible dischargers are well aware of our obligation to assure that these uses are protected.

We note that we are not aware of any other situation in other regions in California (or nationwide, for that matter), including where waters are impaired, in which beneficial designation/"exemption" decisions by USEPA rely, apparently solely, on the demonstration that downstream uses will be protected by virtue of project(s) that are already or will shortly be in place, and, further, that such projects have been predetermined to definitively assure downstream water quality protection. In the case of bacteria, definitive assurance that upstream contributions to downstream waters will not result in a water quality problem can be provided only by complete diversion of the upstream flows, which in most cases would severely impact wildlife-related and other beneficial uses.

To control pathogen inputs in a practical and responsible manner, an iterative approach to identify, evaluate and implement effective control actions is crucial. We also recognize that more than one BMP may be required. It is simply infeasible to prove in advance that a specific BMP or set of BMPs to control pathogen indicators, other than total stream diversion, will assure downstream recreational use protection. This iterative

approach to BMP implementation is the one now being employed in the Santa Ana Region. It makes sense, and it is working.

Given USEPA's disapprovals, however, we find ourselves in a "Catch 22" situation. As we discussed with USEPA staff during the development and consideration of the amendments, implementation of certain, already planned diversion projects to address downstream quality protection rested on USEPA's approval of the recommended use de-designations. (USEPA's approval would make possible the placement of projects at locations already identified as best suited to the protection of downstream, known or potential recreation uses, rather than at locations suited to the protection of recreation uses in upstream segments where the UAAs indicate that such uses do not occur and are not attainable. To put it another way, the projects are planned to be implemented at locations best suited to the protection of downstream recreation uses, without the immediate compliance concerns created by leaving inappropriate recreation use designations in place for specific stream segments.) The catch, however, is that USEPA's approval of these de-designations appears to be contingent on *prior* implementation of these projects.

We believe that the projects already planned would enhance the protection of downstream recreation uses that are known or have the potential to occur. Accordingly, we are anxious to provide the regulatory basis to support their implementation. Toward that end, a statement from USEPA that had the facilities been built and operating, USEPA would have approved the de-designations would be very useful. It would form the basis for future pursuit of the de-designations, and facilitate project implementation. We believe that this approach is justified in light of USEPA's apparent rationale for the disapprovals: USEPA's April 8, 2015 decision letter does not cite any foundational issue based on the requisite demonstrations that the REC2 use is not "existing", as defined by federal regulations and in USEPA guidance, and that the use is not attainable pursuant to the UAA factors identified in the UAAs for each of these waterbodies. (We note again our concern with the apparent precedent USEPA has established by requiring downstream protection project implementation in advance of de-designation decisions.)

We request your confirmation that our understanding is correct, and that if projects are implemented to address downstream protection, as proposed and described in the documentation associated with the amendments (and as may be modified in response to physical, permitting or other circumstances), USEPA would be prepared to approve the REC2 de-designations/"exemption". [USEPA employs the term "exemption" in the case of the Santa Ana-Delhi Channel Reach 1 because this water body is a new addition to the Basin Plan and beneficial uses are being designated for the first time as part of the recreation standards amendments. The term de-designation would be inappropriate in this context.]

In short, we seek confirmation that the REC2 disapprovals could become approvals in the future, contingent on the implementation of downstream protection projects. Further, we request that USEPA explicitly identify any further qualifying circumstances that would preclude such future approval. This confirmation and information would facilitate

future UAA efforts to address these waters, as well as the implementation of control measures.

4. Revisions to CHAPTER 4 (Water Quality Objectives, Inland Surface Waters) of the Basin Plan

- *Removal of fecal coliform objectives for REC2; Removal of total coliform objectives for MUN*

The April 8, 2015 decision does not address the Regional and State Board approved amendments to delete the fecal coliform objectives for REC2-designated lakes and streams and the total coliform objective for lakes and streams designated MUN. Based on our discussions with USEPA staff during the development and consideration of these amendments, which led us to believe that these amendments were approvable, we believe that this is an oversight. We request USEPA's confirmation that our understanding is correct.

- *Re deletion of fecal coliform objectives for REC2 lakes and streams:*

USEPA has acknowledged that there is no scientific basis for REC2 bacteria quality objectives, and further that fecal coliform is not a reliable indicator of public health risk and beneficial use impairment in REC1 or REC2 designated waters. For these reasons, the amendments approved by both the Regional and State Board removed these objectives from the Basin Plan.

During the consideration of the amendments, USEPA staff indicated interest in maintaining a numerical value for REC2 protection. We point out that this interest is satisfied as follows:

First, with limited exceptions now approved by USEPA per the April 8, 2015 decision, all of the lakes and streams in the Santa Ana Region are designated both REC1 and REC2. The REC1 numerical objectives will govern bacteria quality conditions in these waters: separate REC2 objectives are not necessary and, again, are scientifically indefensible.

Second, numeric antidegradation bacteria indicator targets are included in the amendments (and now approved, per the April 8, 2015 decision) for those waters designated REC2 only, per the April 8, 2015 decision.

USEPA has disapproved REC2 de-designations/exemptions for three water bodies. Antidegradation targets for these waters were not specified in the amendments, but an implementation procedure to calculate them is included. It is a straightforward matter to determine appropriate antidegradation targets for these few remaining waters not already covered by numeric bacteria quality values.

In summary, numerical bacterial quality values are specified for all REC2-designated lakes and streams, with the very limited exception of the three stream reaches for which USEPA has now disapproved the de-designation of "exemption" from REC2.

Given this, and given USEPA's explicit acknowledgements regarding the lack of a scientific basis for REC2 objectives, particularly based on fecal coliform, we believe that USEPA should proceed as follows: explicitly approve the deletion of the fecal coliform objectives for REC2 lakes and streams; and, require the Regional Board to calculate the appropriate, numeric antidegradation targets for these waters, using the methodology identified in the amendments.

USEPA need not and should not await the approval of a statewide bacteria objectives policy to take these recommended actions. First, the deletion of the REC2 objectives is both scientifically and legally defensible and appropriate. (As documented in the administrative record for these amendments, about half of the established Basin Plans in California do not have any such REC2 objectives.) Second, given the State Board's understandable focus on the drought and related water quality and quantity impacts, it is not clear when a new statewide bacteria objectives policy will be considered. Allowing indefensible REC2 objectives to remain in place has the serious potential to undermine ongoing efforts to implement control measures to protect REC1/REC2 waters at locations where such measures are most needed.

- *Re deletion of total coliform objectives for lakes and streams designated MUN*

As discussed extensively in the administrative record for these amendments and with USEPA staff, these total coliform objectives have been made obsolete by surface water treatment rules. No opposition to or concern about the deletion of these obsolete objectives was expressed by USEPA Region IX staff during the consideration of these amendments. Accordingly, we believe it likely that the failure to address this amendment explicitly in the April 8, 2015 decision was an oversight.

We request USEPA confirmation that our understanding is correct: the fact that the April 8, 2015 decision letter does not address either the deletion of the REC2 fecal coliform objectives or the total coliform objective for MUN reflects only an oversight on USEPA's part. If our understanding is incorrect and USEPA has decided to neither approve nor disapprove these amendments, then we request that USEPA provide explicit notification and the rationale for these decisions.

5. Revisions to CHAPTER 5 (Implementation) of the Basin Plan (APPROVALS AND BASES FOR APPROVALS)

- *Antidegradation targets for REC2 only freshwaters*

The amendments approved by the Regional and State Board include antidegradation targets for REC2 only freshwaters (Table 5- REC2 Only Targets – FW) and

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antidegradation targets for other REC2 only waters (Table 5-REC2 Only Targets – Other Waters). The April 8, 2015 decision approves the freshwater targets, but does not speak to the approval/disapproval of the targets for “other waters”. We believe that this is an oversight, and the USEPA intended to approve all antidegradation targets for REC2 waters that are specified in the amendments.

We request USEPA confirmation that our assessment of USEPA’s intent is correct. If it is incorrect, we request an explanation of USEPA’s rationale.

Given the significance of decisions on these amendments and their long-term effects on the Basin Plan and its record, we believe that a detailed response to this letter is necessary, as soon as possible.

If you have any questions concerning these matters, please contact me at (951-782-3286), Joanne Schneider (951-782-3287) or Dave Woelfel (951-782-7960).

Thank you in advance for your prompt consideration and response.

Sincerely,



Kurt V. Berchtold
Executive Officer
Santa Ana Regional Water Quality Control Board

cc: Larry McKinney – SAWPA/Stormwater Quality Standards Task Force
Joanne Schneider- RWQCB8
David Woelfel – RWQCB8
Rik Rasmussen - SWRCB