

From: [OROS, DANIEL](#)
To: [Smythe, Mark@Waterboards](mailto:Smythe.Mark@Waterboards)
Cc: [Saucerman, Suesan](#)
Subject: Draft QAPP Dated Feb 2016
Date: Wednesday, February 10, 2016 2:45:09 PM
Attachments: [Memo Monitoring SAD and GBC.docx](#)

Mark:

The QAPP states that the Santa Ana Delhi Channel (Reaches 1 and 2) and Greenville-Banning Channel Tidal Prism Segment, which both have a REC-2 designated use, are to be monitored only 1 time per year.

Section 6.2.4.3 Sample Frequency (p.33)

Water quality samples will be collected during dry weather (defined as no measurable rainfall within a 72 hour period prior to sampling) once per year until an *E. coli* or *Enterococcus* result exceeds the antidegradation target threshold value for the site (equal to the 75th percentile of the lognormal distribution fitted to historical data).

However, from the attached memorandum from Regional Board stated:

“The Greenville-Banning Channel is not monitored on a routine basis as part of the current MS4 permit requirements. However, the Channel is monitored on a periodic basis by Orange County Sanitation District (OCS D) prior to diversion of the flows to the OSCD treatment facilities. Reach 2 of the Delhi is also not a part of the current routine monitoring program. Obviously, we and others have conducted periodic special investigations in these waters, such as the bacterial quality studies that were reported in the UAA documents for these channels.” And, “As provided in the implementation plan for the recreation standards amendments, a region-wide pathogen indicator monitoring program is being developed and will include appropriate monitoring in these channels.”

My concern is that these sites will remain a low priority for monitoring and that the collection of only one water sample per year for bacteria analysis will fail to identify potential problems with excessive *E. Coli* and *Enterococcus* bacteria in these waters. A greater sampling frequency for the channels and perhaps other REC2 designated sites in the Santa Ana Watershed will offer greater protection of the downstream receiving waters. Can you please explain why a once per year sampling frequency decision was made for the REC-2 sites? Thank you.

Daniel



Daniel R. Oros, Ph.D.

Water Quality Assessment Office

US EPA Region 9
Water Division; Ecosystems Branch
75 Hawthorne Street (WTR-2-1)
San Francisco, CA 94105-3901
(415) 972-3583
Oros.Daniel@epa.gov

Santa Ana Regional Water Quality Control Board

TO: Suesan Saucerman, USEPA Region IX

FROM: Joanne Schneider, David Woelfel
SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

DATE: February 12, 2015

SUBJECT: MUN exceptions monitoring

This is to respond to your inquiry about the Regional Board's monitoring requirements for Reaches 1 and 2 of the Santa Ana Delhi Channel and Reach 1 of the Greenville-Banning Channel to assure compliance with relevant water quality objectives.

Extensive monitoring of the urban runoff that dominates these reaches is conducted (and has been for many years) at selected, representative locations, including a location in the Santa Ana Delhi Channel, Reach 1 (identified as "SADF01") pursuant to both established/proposed TMDLs for the Newport Bay watershed (including nutrients and toxics substances(e.g., selenium)) and Orange County's MS4 permit requirements. This location was selected as one representative of urban runoff discharges; clearly, routine monitoring on all channels is infeasible. A wide range of parameters are evaluated, including bacteria, nutrients and toxics substances. Please refer to the Orange County MS4 Monitoring and Reporting Program: http://www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/wq_monitoring_plan.shtml. (A pdf version is attached for your convenience.) You will see that there is an ongoing, extensive Receiving Waters Monitoring program with multiple program elements, including mass emissions, estuary/wetland monitoring, bacteriological/pathogen monitoring. This is a lengthy document: you may wish to review the Introduction and Program Overview sections (beginning at p.8 and 12 of the pdf, respectively) for orientation purposes. Section 3, Receiving Water Monitoring Program Elements, begins on p. 14 of the pdf.

As you review, you will note that the SADF01 station is monitored as part of at least three program elements: mass emissions (Section 3.1; see p. 14, and esp. the top bullet on p. 15 of the pdf); Section 3.2 estuary/wetlands (p.. 24 of the pdf); and Sec. 3.3 Bacteria/Pathogens (p. 32 of the pdf). This location is also employed in the nutrient TMDL program (p..17 of the pdf), for toxicity evaluations and for a variety of special studies (including phosphorus and algae). Of course, selenium is one of the constituents now being evaluated as part of the development of a revised selenium TMDL.

The Greenville-Banning Channel is not monitored on a routine basis as part of the current MS4 permit requirements. However, the Channel is monitored on a periodic basis by Orange County Sanitation District (OCSD) prior to diversion of the flows to the OSCD treatment facilities. Reach 2 of the Delhi is also not a part of the current routine monitoring program. Obviously, we and others have conducted periodic special investigations in these waters, such as the bacterial quality studies that were reported in the UAA documents for these channels.

The Regional Board is currently engaged in updating the MS4 permit for Orange County, including consideration of monitoring and reporting requirements. As you know, the Santa Ana Delhi and Greenville-Banning Channels are being added to the Basin Plan for the first time, and we will recommend appropriate changes to the established program to address new/additional monitoring needs in these channels, taking the MUN exceptions into account. As provided in the implementation plan for the recreation standards amendments, a region-wide pathogen indicator monitoring program is being developed and will include appropriate monitoring in these channels.

If you have time and interest, you may wish to review the attached MS4 program report chapter (November 2014), which addresses the monitoring program and its findings.



wq_monitoring_plan_
OC MS4.pdf



Section 11.0 SAR
2013-14 Exhibits.pdf

RESPONSE TO US EPA COMMENT LETTER

The comment letter seems to identify two separate issues. The first is that annual sampling of “REC-2 Only” waters will fail to adequately protect the downstream receiving waters of the Santa Ana Delhi Channel, the Greenville-Banning Channel and perhaps the other REC-2 only waters identified in the REC STDs Basin Plan amendment; and the second is that annual sampling of “REC-2 Only” waters will be insufficient to identify potential problems with excessive E. Coli and Enterococcus bacteria in those “REC-2 Only” waters.

With regards to the protection of downstream waters, it should be noted that for the Santa Ana Delhi Channel, in addition to the annual sampling proposed in the Tidal Prism and just upstream of Irvine Avenue, the downstream end of the Tidal Prism is monitored weekly by the Orange County Environmental Health Department for fecal coliform and enterococcus densities as a result of Assembly Bill 411. For the Greenville-Banning Channel, during dry weather, an inflatable dam diverts all dry weather flow from the channel to the Orange County Sanitation District treatment facilities and the Tidal Prism is composed entirely of ocean water. During wet weather, when flows from the Greenville-Banning Channel are allowed to enter the Tidal Prism and flow into the Santa Ana River and subsequently the Pacific Ocean, again as a result of Assembly Bill 411, throughout the year, the Orange County Health Care Agency samples the beach at the river mouth on a weekly basis and Orange County Sanitation District samples the beach twice a week. For Cucamonga Creek, the “REC-2 Only” sampling point is just upstream of the Mill Creek Treatment Wetlands and just downstream of those wetlands is a Priority 1 sampling point that will be monitored weekly for 20 weeks during warm dry weather, weekly for 5 weeks during cool dry weather and during one storm event, annually. And finally Temescal Creek empties into the Prado Basin Management Zone just upstream of Prado Dam. The flood retention area is thick with vegetation and there is no public access provided and downstream of Prado Dam, the Santa Ana River (Reach 2) has a Priority 3 sampling location and will be sampled weekly for a 5-week ‘dry weather’ period every year.

As to the more general argument that annual sampling will be insufficient to identify potential problems in the “REC-2 Only” waters, it’s important to note that a primary reason for Regional Board staff’s work on the REC STDs Basin Plan Amendment was to properly identify those waters where REC-1 activities occur and to prioritize monitoring resources to the protection of those waters. Even then, first, the proposed monitoring plan includes annual monitoring of these “REC-2 Only” waters and requires comparison of monitoring results to historical values. If that annual monitoring exceeds the historical 75th percentile bacteria density (as identified in both the proposed monitoring plan and the REC STDs Basin Plan Amendment), then samples will be collected for the following three months and any exceedance during those three months will trigger monthly sampling until the bacterial source is mitigated and bacteria levels return to below the 75th percentile target. Secondly, as part of the Use Attainability Analysis (UAA) that was performed for these “REC-2 Only” waters, Regional Board staff will be conducting monitoring (5 weekly samples) every three years as part of the UAA process.

Finally, the REC STDs Basin Plan Amendment language that was approved by US EPA specifically states in the “Monitoring Plan for Pathogen Indicator Bacteria in Freshwaters” that “... (8) the monitoring plan must include a proposal for periodic monitoring of waters designated REC2 in order to confirm that there is no significant degradation of the quality of these waters” (emphasis added). Regional Board staff believe that the monitoring being conducted by all agencies will provide sufficient protection to these “REC-2 Only” waters, however if conditions change (such as changes to the AB 411 mandate), the proposed monitoring plan (and the REC STDs Basin Plan Amendment) requires a triennial review of the monitoring plan with revisions as necessary.