



Delta Regional Monitoring Program (RMP) Technical Advisory Committee (TAC) Meeting

September 24, 2015

1:00 PM – 4:30 PM

**Sacramento Regional County Sanitation District Building
10060 Goethe Road, Sacramento, CA 95827**

Summary

Attendees:

TAC (and/or Alternate) members present¹:

Stephanie Fong, Water Supply (State and Federal Contractors Water Agency)

Brian Laurenson, Stormwater – Phase I (Larry Walker Associates)

Joe Domagalski, TAC co-Chair (U.S. Geological Survey)

Stephen McCord, TAC co-Chair (McCord Environmental, Inc.)

Mike Johnson, MLJ LLC (Agriculture)

Karen Ashby, Stormwater – Phase II (Larry Walker Associates)

Vyomini Upadhyay, POTWs (Regional San)

Tim Mussen, POTWs (Regional San)

Erwin Van Nieuwenhuysse, Coordinated Monitoring (Reclamation)

By phone:

Debra Denton, Regulatory – Federal (U.S. EPA Region 9)

Tony Pirondini, POTWs (City of Vacaville)

Others present:

Patrick Morris, Central Valley Regional Water Board

Thomas Jabusch, SFEI-ASC

Hope Taylor, LWA

Selina Cole, Central Valley Regional Water Board

Cam Irvine, CH2M Hill

Rachel Kubiak, Western Plant Health Association

Linda Deanovic, UC Davis APHL

Phil Trowbridge, SFEI-ASC

Jim Orlando, USGS

Linda Dorn, Regional San, co-Chair of Steering Committee

On phone:

Hamid Parsa, Mountain House CSD

¹ Name, Representing Category (Affiliation)



Bruce Houdesheldt, SVWQC, Alternate SC Representative for Agriculture
 Sam Harader, Delta Science Program
 Atley Keller, MEI

1.	Introductions and Agenda
2.	<p>Approve Meeting Summary from May 27, 2015</p> <p>Brian Laursen commented that summaries should be clearer about whether a discussion item reached a consensus decision or not. Stephen McCord reported that recommendations by the TAC are captured in the TAC Record Google sheet.</p>
3.	<p>SC Updates</p> <p>ASC staff and TAC co-Chairs updated the TAC on the final approved versions of the Monitoring Design and FY15/16 Workplan and a Prop 1 proposal submitted on behalf of the Delta RMP.</p> <p>The Monitoring Design was approved at the June 16, 2015 SC meeting. The Steering Committee made a few edits to the assessment questions and introductory sections of the document as part of the approval process.</p> <p>The FY15/16 workplan was approved as presented at the June 16 SC meeting. The initial budget implements the “bare minimum” cost options for current use pesticides, nutrients, and pathogens from the Monitoring Design. However, not all of the approximately \$900K budget for the year is fully secured and \$100K is not coming in when expected due to delays in the payment process.</p> <p>At the request of the Steering Committee co-chairs, ASC submitted a proposal for Prop 1 funding on behalf of the Delta RMP. The proposal is for \$637,000 for two years of mercury monitoring in fish and water, which is an unfunded component of the Monitoring Design. If successful, all the Prop 1 funding would be passed through to Moss Landing Marine Laboratories (MLML) to support water and fish sampling and analysis. Mike Johnson suggested that it would be worth checking in with the California Department of Water Resources (DWR), because of their need for mercury monitoring data for use in modeling. Additional Prop 1 solicitations are anticipated in future years. There are also other possibilities for grant applications, such as recent solicitations by the U.S. Department of Agriculture (USDA). However, it would be a considerable effort to track relevant solicitations and respond to</p>



	<p>them. Phil Trowbridge explained that the Bay RMP does not pursue grant applications but does cost sharing with grant-funded projects.</p>
<p>4.</p>	<p>Monitoring Update</p> <p><i>Pathogens</i></p> <p>Brian Laurenson reported on the status of analyses of ambient water samples collected by the DWR Municipal Water Quality Investigations (MWQI) program. The analyses are done using EPA Method 1623, which is the standard method for monitoring in support of EPA’s Long Term 2 (LT2) Enhanced Surface Water Treatment Rule. The pathogen monitoring effort uses a primary and secondary lab and runs a matrix spike once per sampling event (more than water agencies usually do, which is 1-2 times/year). There were low recoveries for spiked samples in the first three events. The method for extracting pathogens requires a reagent for which there is only one supplier. The low recoveries were due to a nationwide problem with this reagent. The corrective actions taken include the switching from EPA Method 1623 to 1623.1, reducing the number of stations sampled, and increasing the number of duplicates sampled at each site. Changes to the sampling design were made to evaluate whether a particular site’s matrix was causing a problem. EPA 1623.1 is an allowed method that has better cleanup than 1623. The supply issue has been worked out and pathogen monitoring went back to the original sampling plan and EPA Method 1623. Widely variable recoveries (0% up to 40%) are typical for ambient samples analyzed by this method and LT2 has a safety factor built in that assumes poor recoveries. The pathogen subcommittee (aka Central Valley Drinking Water Policy Workgroup) is planning to evaluate the data in more detail toward the end of the calendar year, after some wet weather has occurred. The data evaluation will provide a basis for adaptations to the monitoring and additional study proposals in year 2 of the study. Additional scope and costs for a modified study in year 2 can be estimated now, for consideration by the Steering Committee.</p> <p><i>Nutrients</i></p> <p>Starting in early 2016, ASC will convene a workgroup to develop recommendations for high priority monitoring gaps that the Delta RMP could address in its FY16/17 workplan. The TAC Nutrient Subcommittee will be included in this workgroup, along with other relevant experts. The workgroup will review synthesis reports that are being prepared and other relevant information. These reports include a synthesis of the Interagency Ecological Program (IEP)/DWR Environmental Monitoring Program (EMP) datasets, and the Delta RMP-funded synthesis of high-frequency sensor data</p>

conducted by the U.S. Geological Survey (USGS). The review will also consider the 5 white papers (covering drinking water, cyanobacteria, ratios, macrophytes, and modeling) that will be prepared for the Central Valley Water Board's Delta Nutrient Science Plan by the end of the year.

Pesticides sampling

Joe Domagalski and Jim Orlando (USGS) presented an update on Current Use Pesticides (CUPs) sampling and analytical results. There was a discussion of the sampling locations and trying to collect the samples at Buckley Cove from the middle of the channel rather than from shore. Buckley Cove has the most pesticide detections so far, with 10 compounds detected in the July and August sampling events. The Ulatis Creek site is second in number of pesticide detections, and Vernalis the least. Many detections were for herbicides used in rice. There is also spraying across the entire Delta to control water hyacinth. The pesticides used in these applications include fluridone, penoxsulam, and glyphosate. The Delta RMP sampling effort has detected fluridone and penoxsulam. Glyphosate is not included in the Delta RMP list of analytes. The National Water Quality Assessment program (NAWQA) is sampling for glyphosate at both the Sacramento (Freeport) and the San Joaquin (Vernalis) rivers. NAWQA has detections of glyphosate degradation products at Vernalis, but not at the Freeport site.

Toxicity testing

Linda Deanovic from the UC Davis Aquatic Health Program Laboratory (AHPL) reported preliminary results from toxicity tests conducted for the first two rounds of sampling. Algal toxicity tests were inconclusive for two sites from the first sampling event, Buckley Cove and Mokelumne River at New Hope Road. The current SWAMP method for establishing significant toxicity minimizes heteroscedasticity by comparing each sample with the control.

There was a discussion about ongoing problems with the *Ceriodaphnia* test. AHPL has already attempted several corrective actions. Since there were three culture test failures prior to the September sampling event, *Ceriodaphnia* tests are being run at another lab (Aqua Science) for the September event. AHPL is taking corrective action to resolve the issue and the TAC offered helpful advice to that end.

Toxicity Identification Evaluations (TIEs)



	<p>Linda Deanovic (AHPL) also requested more guidance from the TIE subcommittee on how to run TIEs for algae. Cam Irvine commented that the TIE subcommittee had a few more details to work out on the TIE guidance, including an understanding of the budget and the cost per treatment. Linda advised that the pricing structure for TIEs in other labs is different from that used by SWAMP and may need to be considered in future planning.</p> <p><u>Recommendations:</u></p> <ul style="list-style-type: none"> - Call a nutrients subcommittee meeting in early 2016 and invite all TAC members - Schedule a TIE subcommittee meeting to review the toxicity test results to-date - Complete the TIE guidance document - Include cost per treatment as another criterion for ordering TIEs - Obtain and evaluate available hydrodynamic modeling results around the Buckley Cove site to characterize lateral variability
<p>5.</p>	<p>Supplemental budget request for 2nd pesticide lab</p> <p>Thomas Jabusch presented a supplemental budget request for 3 duplicate pesticide samples (5% of 60 ambient samples) at a second laboratory. The request was prepared as a one-time study to provide additional quality control (QC). However, it would be up to the TAC to recommend secondary lab analyses as a continuing part of the program. The proposed secondary lab is the Department of Fish and Wildlife (DFW) Water Pollution Control Laboratory (WPCL). The request is for \$12,847 (\$11,247 for the analyses quoted by the lab plus \$1,600 for additional data management effort). The proposed cost includes Level 1 Quality Control (method blank, laboratory control standard, and laboratory control standard duplicate) at no charge. The Level 2 charge (adding matrix spike and matrix spike duplicate) would be equal to the cost of one analysis, if received in batches of 10 or less or free for batches of > 20 samples. The group agreed that matrix spikes would be important for interpreting the data and the cost of getting these QC samples should be added to the proposal. The group also discussed how the data would be interpreted. It was agreed that the QAPP does not state how interlab comparability studies should be run but that the same protocols for evaluating laboratory duplicate samples could be used. If the results were ambiguous, the next step would probably be to fund and implement a more rigorous study.</p> <p><u>Recommendations:</u></p>



	<ul style="list-style-type: none"> - TAC members review the available analytes and their MDLs for the candidate second laboratories (WPCL and others) to make sure they are compatible with the USGS lab, especially for pesticides that are currently being detected. - Space the samples over 3 sampling events and sites: at Buckley Cove as soon as possible, at Vernalis during the rainy season, and at Ulatis in March. - Deliver samples to both labs within required hold time - Add matrix spikes to the cost proposal
<p>6.</p>	<p>DRAFT Communications Plan and Program Planning Overview</p> <p>ASC staff provided an orientation to and led a discussion about two draft documents, the Delta RMP DRAFT Communications Plan and the DRAFT Program Planning Overview. Both documents will be presented to the SC for an initial review on October 23. The Communications Plan describes the processes and products used by the Delta RMP to communicate program results. It does not include a detailed data assessment plan. Copies of the most recent <i>Pulse of the Delta</i> (2012) and <i>Pulse of the Bay</i> (2015) were available.</p> <p><u>Recommendations:</u></p> <ul style="list-style-type: none"> - Change “Annual Monitoring Results” to “Annual Summary Report” - Add “Annual Meeting” to the Communication Channels section. - Consider removing terminology that refers to regulatory activities (e.g., exceedances), but do include a thresholds comparison to the data analysis. - Note that data assessments should address the RMP’s management questions - Delete both attachments. <u>Linda Dorn explained that POTWs and Pamela Creedon developed one of these attachments (flowchart “Interaction between RMP and Regional Water Board in data evaluation and follow-up”) independently of the Delta RMP decision-making process. It was because of this fact that the TAC recommended that the flowchart be removed from the Communications Plan.</u> - Ask the SC to provide guidance to the TAC on which details of the assessment component (the flowchart “Interaction between Delta RMP and Regional Water Board” that was formerly attached) to review.
<p>7.</p>	<p>Provisional Data Policy</p> <p>When reviewing the Delta RMP reporting cycle, the release of provisional data for TAC members was also discussed.</p>



	<p>Recommendations:</p> <ul style="list-style-type: none"> - Provisional data should be made available as soon as possible. This step should be written into the Communications Plan. - Provisional data need to be clearly marked as draft and should be downloadable by TAC members. - ASC will upload provisional data for password-protected TAC access, TAC members will be able to share data stories in the password-protected workerbee space of the California Estuaries Portal.
<p>8.</p>	<p>External Review of Monitoring Design</p> <p>The group discussed options for reviewing the Monitoring Design document. There was agreement that convening an expert panel was the best approach. The Delta Science Program and Water Quality Monitoring Council could assist with identifying the appropriate experts.</p> <p>Recommendation:</p> <ul style="list-style-type: none"> - Update the slides with recommendations for an external review process to present to the SC in October.
<p>9.</p>	<p>Wrap-up</p> <p>Stephen McCord suggested that parking lot items that have not yet been addressed would be potential agenda items for the next meeting.</p>
<p>10.</p>	<p>Action items:</p> <p>May 27 meeting summary</p> <ul style="list-style-type: none"> - Add Hope Taylor to the list of attendees – <i>done</i>. - Brian Laurenson: Provide edits to summary to reflect that discussion of Pyrethroids TMDL was not concluded – <i>done</i>. - Stephen McCord: Post the version of the TAC Hyalella memo with edit made after distribution to the SC – <i>done</i>. <p>Prop 1</p> <ul style="list-style-type: none"> - Phil Trowbridge: follow-up with Jamie Anderson at DWR regarding funding for mercury monitoring to calibrate the DWR mercury model (by October 23). <p>Pesticides sampling</p> <ul style="list-style-type: none"> - Joe Domagalski: research options for collecting samples at Buckley Cove in the middle of the channel and report back to the TAC (by November 1). - Stephen McCord: Search for modeling information about lateral mixing at Buckley Cove (by November 1) <p>TIE subcommittee</p> <ul style="list-style-type: none"> - Thomas Jabusch: organize a teleconference of the TIE subcommittee to



	<p>discuss further edits to the TIE guidance, the TIE treatment list, an update on the <i>Ceriodaphnia</i> issue at AHPL, and the cost per treatment for TIEs so that the group can manage its budget of \$40,000 for the year (by October 16).</p> <p>Secondary lab for pesticide analysis</p> <ul style="list-style-type: none"> - Thomas: send the TAC the following lists: (1) target pesticide lists with MDLs for WPCL and the other labs that are being considered for the interlaboratory comparability study for pesticides; (2) the current list of target pesticides for the USGS lab; and (3) the list of pesticides that have been provisionally detected in the Delta RMP samples so far in FY15/16. - TAC members: notify ASC if they have concerns about using the default lab (WPCL) by October 2, 2015. - Thomas: will modify the Supplemental Budget Request with a required matrix spike sample, the schedule, and locations of the sampling (by October 9, 2015). <p>Communications Plan</p> <ul style="list-style-type: none"> - Thomas: Update the Communications Plan with comments suggested at the meeting before sending to the SC (by October 9, 2015). <p>External Review Process</p> <ul style="list-style-type: none"> - Thomas: Update the slides with recommendations for an external review process to present to the SC in October (by October 16, 2015).
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