



# Technical Advisory Committee Meeting Summary

## July 19, 2019

Regional San, 10060 Goethe Road, Sacramento

### Attendees:

#### Technical Advisory Committee (TAC) members and alternates:

TAC Members	Representing	Affiliation	Position
Ashby, Karen	Stormwater	Larry Walker Associates (LWA)	member
DiGiorgio, Carol	Flood control and habitat restoration	Department of Water Resources (DWR)	member
Domagalski, Joe	Coordinated monitoring	U.S. Geological Survey (USGS)	alternate
Hoffman, Krista	Water supply	DWR	alternate
Irvine, Cam	POTW	Robertson-Bryan Inc.	alternate
Johnson, Michael	Agriculture	MLJ Environmental	member
Laurenson, Brian	Stormwater	LWA	member
Mussen, Tim	POTW	Regional San	member
Phillips, Amy	Stormwater	El Dorado County	member
Taylor, Hope	Stormwater	LWA	alternate
Turner, Melissa	Agriculture	MLJ Environmental	alternate
Van Nieuwenhuysse, Erwin	Coordinated monitoring	Interagency Ecological Program (IEP) / US Bureau of Reclamation (USBR)	member

## Staff

Cole, Selina	Staff, TAC alternate	Central Valley Regional Water Quality Control Board (Central Valley Board)
Davis, Jay	Senior Scientist	Aquatic Science Center (ASC)
Heberger, Matthew	Program manager	Aquatic Science Center (ASC)
Howard, Meredith	Staff	Central Valley Board
Fojut, Tessa	Staff	State Water Resources Control Board, Office of Information Management and Analysis
McCord, Stephen	TAC Chair	McCord Environmental
McClure, Danny	Staff	Central Valley Board
Robinson, April	Staff ecologist	Aquatic Science Center (ASC)

## Others

Heim, Wes		Moss Landing Marine Laboratories
Kapahi, Gita	Facilitator	Office of Public Participation
Louie, Stephen		Department of Fish and Wildlife
Orlando, Jim	Cooperator	U.S. Geological Survey (USGS)

## 1. Introductions and Agenda

Participants approved the agenda. Gita Kapahi served as facilitator for the meeting. The TAC chairman, Stephen McCord, reviewed the guidelines in the Delta RMP Charter related to TAC meetings and communication between the TAC and the Steering Committee (SC). Ms. Kapahi asked participants to agree to a set of ground rules for the meeting to help make sure that all TAC members are heard:

- TAC members (or the alternate if the member is not available) only at the table—others “in the audience” except when invited.
- Stick to the agenda. If a TAC member wishes to discuss something that is not on the agenda, the TAC as a whole must agree to add it to the agenda and to allocate time for the discussion.
- Each “participant category” should have a chance to voice their views on each and every agenda item.
- No one dominate discussion – reminder to participants to step back if you have been speaking a lot, and to the facilitator to call on those who have not spoken.

## 2. Decision: Approve past TAC Meeting Summaries and confirm future TAC meeting dates

The committee reviewed the upcoming meeting calendar and set the date below for the December TAC meeting. If possible, the committee requested that the key points to be conveyed

from the TAC meeting to the Steering Committee be distributed to the TAC before each Steering Committee meeting. Matt Heberger noted to the committee that going forward Central Valley Board staff has requested 14 calendar days (10 business days) to review agenda materials. Staff are working toward this, but it will likely take one or two meetings to get there.

### **Upcoming Scheduled Meetings**

- Steering Committee Meeting: Monday, August 5, 2019, 10:00 – 4:00, DWR, 3500 Industrial Blvd. #131, West Sacramento
- Long-Range Planning Workshop, July 31, 2019, 9:00 – 4:00, Regional San
- TAC Meeting: Friday, September 13, 2019, 10:00 – 4:00, Regional San
- TAC Meeting: Tuesday, December 10, 2019, 10:00 – 4:00, Regional San

### **Decisions:**

- Future TAC meeting date set for Tuesday, December 10, 2019.
- The TAC Meeting Summaries for May 9, 2019 and May 24, 2019 were approved by consensus. Members needing more time to review the summaries were asked to email comments directly to Matt.

### **Action Item:**

- Confirm meeting room location for the December meeting and forward date, time & location information to the committee (Matt Heberger, by 8/9/2019).

## **3. Information Item: Steering Committee Update**

The meeting summary from the May 29, 2019, Steering Committee Meeting was included in the agenda package (pages 18–23). The focus of the May 29 meeting was to approve the 2019-2020 Fiscal Year Workplan and Budget. The workplan and budget were approved with certain modifications. Qualifications were noted for monitoring pesticides and toxicity, mercury at restoration sites and Contaminants of Emerging Concern (CECs):

- First six months of pesticides and toxicity for the 2019 Water Year (up until March 2020).
- Mercury Study Option A was approved. Staff will do more detailed planning for the 'wetland restoration monitoring' component of Hg study and request funding (\$70,000) at a future SC meeting after additional review/discussion within the TAC.
- CECs: Approved project, but funding only for the fish monitoring up to \$35,000. Directed staff to reconsider choice of lab for water monitoring. Directed staff to complete project planning and finalize the Quality Assurance Project Plan. The program is seeking funding for the rest of the study via a Supplemental Environmental Project (SEP).

The Steering Committee requested that the Delta RMP create a policy to document, using a form, any deviations in the approved monitoring plan. This form would document any deviations from the approved Quality Assurance Project Plan (QAPP), changes that were made,

and corrective actions taken. This new requirement applies to all labs going forward. SC member Rebecca Franklin and TAC member Cam Irvine provided ASC with a suggested format, based on another regional monitoring program in the northwest. The Data Management Subcommittee will review the proposed corrective action form at their next meeting and make a recommendation for how to put it into practice. The recommended form and procedures will then be forwarded to the TAC for review and to the Steering Committee for approval.

At the May SC meeting, it was requested that Deltares share with agency staff any scripts, tools or methods they developed for handling California water quality data. Matt Heberger has forwarded this request to them.

#### **Action Item:**

- Schedule a meeting of the Data Management Subcommittee to discuss the proposed corrective actions/QAPP deviations form, then put final form into practice. (Matt Heberger and Selina Cole, by 7/31/2019).

## **4. Technical Subcommittee and Monitoring Updates**

Updates were provided from the subcommittees covering Mercury (Jay Davis), Nutrients and Constituents of Emerging Concern (Matt Heberger), and Pesticides (Jim Orlando).

### **Mercury**

The following areas were covered: Sampling, Analysis, Reporting and Planning

**Sampling:** Water sampling is being done at 8 sites over 10 months and is going as planned.

Monthly sampling started in January, with July sampling finishing this week. The next sampling is scheduled for August, September and October.

**Analysis:** The analysis is going as planned, with everything being analyzed within hold times.

**Reporting:** The Draft Year 2 Report is planned for distribution next week. The draft report will be distributed concurrently to the subcommittee and the TAC. Committee members will have two weeks to provide comments on the report.

**Planning:** A meeting was held with the Department of Water Resources (DWR) wetland restoration managers on June 27<sup>th</sup> to obtain the additional information needed for the restoration monitoring design.

### **Nutrients and Constituents of Emerging Concern**

Matt Heberger provided a brief update on the special projects: Chlorophyll Lab Intercalibration, and Water Year 2016 Model Development, Sacramento River Nutrient Change Study and CEC Pilot Study.

**Chlorophyll Lab Intercalibration:** Task 3, Laboratory Intercalibration Study, (10 labs are participating), is scheduled for 3 sampling runs (May 7, July 9 and August 20) To date, the first two sampling rounds have been completed. The final Task 4, (Fall 2019) will be a summary

report with recommendations for next steps. Phase III is tentatively planned for FY 20-21 to provide “further investigation into sources of variance and/or strategies for minimizing.”

**Water Year 2016 Biogeochemical Model Development:** This item refers to the Delta RMP special study authorized in the FY18-19 workplan, “Merging High-Frequency Water Quality Data and Models to Gain Insights in the Factors Regulating Phytoplankton Blooms in the Delta in Water Year 2016.” SFEI has a modeler working on this full time, Dr. Allie King, who has been making steady progress. SFEI is planning to give an in-depth progress update on this project at the next Nutrient Subcommittee meeting.

**Sacramento River Nutrient Change Study:** Subcontracts are in place, QAPP development underway. Delta RMP contribution: \$256,688

**Constituents of Emerging Concern (CECs) Pilot Study:** Steering Committee approved only \$35K in funding for fish monitoring at the May meeting; waiting external SEP funding for study.

**QAPP Development:** QAPP elements for both the Sacramento River Nutrient Change Study and the CEC Pilot Study are in development. The QAPP for the Nutrient Change Study is being added to the Delta RMP QAPP. The CEC Pilot Study QAPP is a new document. The concern was expressed that the CEC QAPP is not scheduled to be finalized until September, but that fish sampling had been tentatively scheduled to begin in August. Staff are working to schedule the fish sampling event, and will not authorize sampling until the QAPP is finalized and approved.

## **Pesticides**

Four sampling events have been conducted in December, February, April and June. Event #5 will take place in two weeks. Pesticides/toxicity monitoring is funded only through March 2020. Overall 56 pesticides have been detected in water samples, 7 in sediment. The data from the first 3 events has been compiled but is not yet in NWIS. The committee discussed what steps should be taken to further investigate those results. There was general agreement that adaptive management should be part of the long-term planning discussion. This topic will be added to the July 31<sup>st</sup> Long-Range Planning Workshop Agenda or another future meeting agenda.

Marie Stillway was unavailable to give an update on the toxicity results. The SWAMP funding will no longer be available after March 2020 and there was discussion regarding how to select the next toxicity laboratory to analyze Delta RMP samples after March 2020. There was discussion around the need to clarify the scope and the purpose of any intercalibration study and how that study would or would not be used to select the next toxicity laboratory. There were 3 questions identified that need to be more precise in language and next steps defined: 1) Selecting a new laboratory, 2) Evaluating the flexibility within an existing method and 3) Evaluating new protocols that have not been used by many laboratories. The first question (Selecting a laboratory) must be done prior to March 2020 and Matt will outline a timeline for what next steps need to occur in order to select a new laboratory by then.

## Action Items:

- Comments on Mercury Year 2 Report are due within two weeks of receipt of draft report from Jay Davis. (TAC Members)
- Reconcile the timeline for completion of the final CEC QAPP estimated for September, with the CEC sampling planned to begin in August. (Matt Heberger, by 8/5/2019)
- Send provisional mercury data to Regional Board Staff for use in data analysis to compute mercury Total Maximum Daily Loads (TMDL) for the forthcoming Central Valley Basin Plan Amendment. (Matt Heberger, by 8/15/2019)
- Consider adding to the agenda for the Long-Range Planning Workshop or another future meeting (1) Adaptive Management Discussion – how and when to address monitoring data results? (2) Potential conflict of interest regarding labs participating in selection discussions that may be bidding on the project. (Matt Heberger, by 7/25/2019).
- Consider compiling provisional pesticides and toxicity data in a single source where they can be compared (Matt Heberger, by 7/31/2019)
- Consider doing some analysis on pesticides uses and loads, with a view towards understanding the causes of exceedances of aquatic life benchmarks (Matt Heberger, by 7/31/2019).

## 5. Update on the Pesticides Interpretive Report

Deltares has been asked to wait for a “notice to proceed” pending TAC review of the data and methods. A conference call with Deltares and Delta RMP stakeholders on July 15 generated a list of outstanding items and concerns. Those concerns were summarized in a July 15 meeting summary. Committee members were asked to review the July 15 meeting summary no later than Friday, July 26 to ensure all necessary revisions have been accurately captured. Once the final version of the Deltares technical memo is received, reviewed and approved by the TAC, the contractor will be given notice to proceed.

The committee discussed the July 19, 2019 memo from Matt Heberger regarding the most appropriate wording for the numeric values used to evaluate whether chemicals in the environment are toxic. The committee could not agree on the term to use, and suggested the SC decide (given that a SC chair already suggested “??”) but there was least opposition to ‘Aquatic Toxicity Benchmarks’. The choices include benchmark, toxicity threshold, trigger, and screening values. The committee recommended revising the definition to:

[Toxicity threshold values] are needed to interpret monitoring data ~~with respect to whether there is~~ by indicating potential risk to aquatic life from pesticides. In this report [“threshold values”] are concentrations of a pesticide above which there is concern that the pesticide(s) may be causing harm to aquatic life. ~~While intended to be conservative,~~ ~~†~~ The [toxicity thresholds] used in this document may not be always be protective in the sense ~~that they these~~ are not State water quality objectives and are based only on the available ecotoxicity data. Conversely, they may be overly conservative for the Delta.”

### **Action Items:**

- TAC members should read the summary of the July 15 meeting with Deltares, and make sure that it accurately captured their concerns about the proposed methods. Forward any remaining comments or revisions to Matt no later than Friday, July 26<sup>th</sup>. (TAC Members, by 7/26/2019)
- Follow up with Deltares on their lack of response to some TAC member comments, e.g. those by M. Johnson (Matt Heberger, by 7/29, 2019)
- Schedule a one-hour conference call one week after receiving final tech memo from Deltares. Keep TAC updated on any follow-up issues with Deltares. (Matt Heberger, by 8/31/2019).

## **6. Recommendation: Mercury Monitoring in Tidal Wetlands Restoration Sites**

Jay Davis and April Robinson presented the revised and expanded proposal for mercury monitoring in tidal wetlands restoration sites. It was clarified that the restoration sites were selected based on the greatest concentration of tidal marsh restoration in the Delta. However, the reference and restoration site selection did not focus on a paired site approach but rather selecting across a range.

After discussion the committee agreed to recommend to the Steering Committee to move forward with the funding for the bass monitoring which is focused on long-term effects on a regional scale. The question that will be answered with the bass monitoring is “Is there an effect of restoration projects on ambient mercury in sportfish on a subarea scale?”

However, the committee requested the following additional information on the plan for prey fish monitoring:

- Note which species of prey fish and range of sizes will be targeted (silversides) and viable alternatives.
- Explain comparability of expected data to previous data in terms of species, size range, season collected, and methods of collection.
- State the question/hypothesis related to restoration being asked/answered?
- Include more justification for reference sites (i.e., criteria for how the sites were chosen in the proposal).
- Confirm for sites 4-5-6 that the sites are separated well enough.
- Since juvenile fish can be moving between sites on the tide cycles, provide hydrodynamic information to confirm the travel range in exposure.
- Describe the restoration activities associated with each site.
- State the screening values which, if exceeded, would warrant more site-specific investigation.

### **Action Items:**

- Revise the restoration monitoring proposal to provide additional information related to prey fish monitoring and site selection. Develop an interim timeline for answering the

above questions within the Mercury Subcommittee. Present the revised proposal to the TAC at the December 10, 2019 meeting. (Jay Davis, April Robinson, by 10/31/2019).

## **7. Discussion: New Assessment Question Related to Pesticides and Human Health**

The white paper included in the agenda package, “Is Protecting Aquatic Life from Pesticides Sufficient to Ensure Human Health Protection in Sources of Drinking Water? (Moran, 2018) contradicts the old rule of thumb that aquatic life is usually more sensitive to contaminants, and that contaminant levels that are protective of ecosystems will by default be protective of human health. The author compared ecotoxicological thresholds to those developed for human health and concluded that, for many compounds, “aquatic life protection actions would not suffice to protect human health.”

The Pesticides Subcommittee recommended that the program consider adding the following management questions related to human health and drinking water impacts.

3. To what extent do current use pesticides contribute to human health risk in the Delta?
  - 3.1 Do pesticides occur at concentrations that exceed water quality regulatory values and benchmarks (“reference values”) for human health?

It was recommended that the Pesticides Subcommittee discuss this question’s wording again. A TAC member noted that Delta RMP monitoring, as it stands, may not be appropriate for addressing this question. To answer the proposed question it could require us to develop a new or revised monitoring plan (e.g., monitoring near water supply intakes). TAC members also questioned whether it is appropriate to monitor drinking water constituents in raw (untreated) water.

### **Action Items:**

- Pesticide Subcommittee to review wording of proposed assessment question related to pesticides and human health (by 9/30/2019).

## **8. Long-Range Planning Workshop Preview**

The workshop goals are to set priorities for monitoring and studies for the next 5 years, making the most effective use of the program resources. Committee members were asked to come prepared to discuss and explain what they want for specific study areas and the overall program. It was suggested to have each stakeholder group present their top study priorities to the group at the Long-Range Planning Workshop. There was some discussion centered around “grounding” the priorities to help make the discussion more productive.

A TAC member expressed serious concerns about the suggested method of dot voting, and whether it's a valid and robust way to weigh options and collect input. Dot voting is a common facilitation tool, but it does have well-known limitations – it can be subject to groupthink, decision fatigue due to too many choices, and the bandwagon effect. One suggested solution is to use an app or a website where people can submit their votes independently via their smartphone or laptop.



**Action Items:**

- Look into an unbiased dot voting app or website for the Long-Range Planning Workshop. (Matt Heberger, by 7/31/2019)

**9. Information: Status of Deliverables and Action Items**

- New action items are as covered in the Summary