



Delta RMP Technical Advisory Committee Meeting

Monday, November 16, 2015; 9:30am – 12:30pm

*Sacramento Regional County Sanitation District, 10060 Goethe Road, Sacramento, CA 95827
Sunset Maple Room*

Call-In Number: 415.655.0381
Attendee access code: 943-326-397#
<https://join.me/sfei-conf-cw1>

DRAFT Agenda

1	<p>Introductions and Agenda Review and agree on agenda and desired outcomes</p>		<p>9:30 Stephen McCord</p>
2	<p>Approve Meeting Summary from September 23, 2015</p>		<p>9:40 Stephen McCord</p>
3	<p>SC Updates Staff and TAC co-Chairs will</p> <ul style="list-style-type: none"> • Summarize the outcomes of the 10/23/15 SC Meeting • Update the TAC on SC decisions • Expectations for 12/18/15 SC meeting <p><u>Desired Outcome:</u> Informed Committee regarding SC decisions</p>	<p>Item 03B – Delta RMP Decision Record up</p>	<p>9:50 Thomas Jabusch Joe Domagalski Stephen McCord Phil Trowbridge</p>
4	<p>Review outline for Nutrient Synthesis Workgroup</p> <p>Desired Outcome: Feedback on proposed approach and recommendation to SC</p>	<p>Item 04 – Delta RMP Nutrients Workgroup</p>	<p>10:05 Thomas Jabusch Phil Trowbridge</p>
5	<p>Discussion: Are adjustments to Monitoring Design needed for FY16/17?</p> <p>The Monitoring Design was approved in June 2015. The plan should be reviewed each year by the TAC to prepare for the Multi-Year Planning workshop with the SC. A few small adjustments have been suggested (see list below). The TAC will discuss whether and how to make these updates.</p> <ul style="list-style-type: none"> • Edit to pesticide assessment question #2 • Additional CUPs to consider for inclusion in target analyte list • Sampling site representativeness at Buckley Cove • Design changes and/or additional follow-up 	<p>Item 05 – Memo re Monitoring Design upd</p>	<p>10:45 Thomas Jabusch Phil Trowbridge</p>



	<p>studies for pathogens</p> <p>Desired outcome: Recommendations for adjustments to Monitoring Design for FY16/17 on onwards.</p>		
6	<p>Inter-laboratory Comparison POTW representatives proposed to send 5% of the Current Use Pesticides (CUP) duplicate samples to a second analytical laboratory for comparison as an additional Quality Assurance procedure. The TAC asked the SC to clarify the objective, and then the SC asked Tony Pirondini (TAC member who initiated the request) to do so.</p> <p><u>Desired Outcome:</u> TAC feedback on objectives, guidance on study design (including appropriate data quality objectives), costs, and timing.</p>	[None]	11:35 Tony Pirondini Stephen McCord
7	<p>Monitoring Updates Review recent sampling and analyses. Liaisons for the pesticide, toxicity and pathogen monitoring efforts will a) recap the initial sampling events and preliminary results, b) review QA issues encountered, and c) review proposed corrective actions.</p> <p><u>Desired Outcome:</u> – Feedback on proposed corrective actions</p>	[None]	11:55 Joe Domagalski Linda Deanovic Brian Laurenson Thomas Jabusch
8	<p>Wrap-up</p> <ul style="list-style-type: none"> – Review and capture TAC recommendations and action items – Message points for SC – Next meeting logistics & agenda items 	[None]	12:15 Stephen McCord Joe Domagalski
9	Adjourn		12:30

Parking Lot

- Re-appoint TAC members for two-year terms?
- Review Ch. 7 of DSP’s Delta Science Review on water quality
- *Hyalella* memo revisions
- More collaborating/partnering (e.g., DWR mercury monitoring for model calibration)

Record of Decision for the Delta RMP Steering Committee

Number	Date	Decision	Meeting Summary Link	Type	Yes	No	Abstain
A-1	2008-2012	Regional Water Board is putting “everything on the table” in terms of monitoring requirements in order to improve efficiency, coordination, and the ability to address important questions at larger spatial scales about water quality and whether management actions are having their intended effects	SC meeting summary 2012-10-12	Consensus			
A-2	2008-2012	Regional Water Board will use the Delta RMP design process and monitoring results to reconsider permit conditions, listings, and other regulatory elements.	SC meeting summary 2012-10-12	Consensus			
A-3	2008-2012	Efficiency, coordination, and buy-in will be increased if the Delta RMP addresses questions and data needs that many parties have in common.	SC meeting summary 2012-10-12	Consensus			
A-4	2008-2012	The geographical scope of the Delta RMP may extend somewhat beyond the legal definition of the Delta, depending on parties’ interests and opportunities to achieve the Delta RMP’s goals.	SC meeting summary 2012-10-12	Consensus			
A-5	2008-2012	There is a common interest among the regulatory agencies and IEP in improving coordination and efficiency and they are willing to be as flexible as possible (given their own regulatory and management constraints) to help achieve these goals.	SC meeting summary 2012-10-12	Consensus			
A-6	2008-2012	The Delta RMP should keep in mind the opportunity it has to influence monitoring and assessment requirements as other monitoring programs (e.g., IEP) review and revise their programs to address new flow objectives and other management / regulatory initiatives, such as the BDCP, are further developed.	SC meeting summary 2012-10-12	Consensus			
A-7	2008-2012	The Delta Plan can serve as a framework for integrating Delta RMP with these other monitoring efforts.	SC meeting summary 2012-10-12	Consensus			

Record of Decision for the Delta RMP Steering Committee

Number	Date	Decision	Meeting Summary Link	Type	Yes	No	Abstain
2012-1	10/12/12	Decisions will be made by general agreement, unless one or more Steering Committee members object, at which point the Chair will call for a vote	FINAL	Consensus			
2012-2	10/12/12	Meeting notices and other materials of broad, general interest will be distributed via the Lyris email list and posted on the project website (currently hosted by the Regional Board), with materials specifically intended for the Steering Committee distributed via a separate email list to Steering Committee members and their alternates	FINAL	Consensus			
2012-3	10/12/12	Decisions can be made only for those items noticed on the meeting agenda, however...	FINAL	Consensus			
2012-4	10/12/12	Items not on the meeting agenda may be discussed at the discretion of the Chair and members should make every effort possible to provide advance notice of their intent to bring up a new item; however, any such discussion will require unanimous consent of the Steering Committee members present, i.e., any member can veto the discussion.	FINAL	Consensus			
2012-5	10/12/12	No proxy voting will be allowed.	FINAL	Consensus			
2012-6	10/12/12	Parties with multiple seats (specifically POTWs and stormwater at this point) may identify a small pool of alternates for their Steering Committee representatives, instead of designating a specific alternate for each representative. Alternatives should be well informed about the Delta RMP and the Steering Committee's issues and be prepared to	FINAL	Consensus			
2012-7	10/12/12	If voting is required, a simple majority of Steering Members present will be required for a decision.	FINAL	Consensus			
2012-8	10/12/12	Steering Committee members shall serve at the discretion of the parties they represent (i.e., they may be removed at any time) and shall be explicitly reconfirmed every two years.	FINAL	Consensus			
2012-9	10/12/12	The current Steering Committee membership is preliminary and this group will meet to continue defining governance issues and the program's basic strategic direction and management questions; subsequent to that, parties may decide to change their representatives on the Steering Committee.	FINAL	Consensus			
2012-10	10/12/12	Decisions can be made only if a quorum is present, defined as 50% or more of the Steering Committee members and 50% or more of the categories.	FINAL	Consensus			
2012-11	10/12/12	For the moment, categories are defined as POTWs, stormwater, regulatory agencies, agriculture, IEP, state and federal water contractors.	FINAL	Consensus			
2012-12	10/12/12	A quorum may be established at any time during the meeting and, once established, will continue to exist for purposes of decision making even if the number of Steering Committee members present drops below the level defining a quorum (e.g., if one or members leave the meeting).	FINAL	Consensus			
2012-13	10/12/12	All Steering Committee meetings must be noticed, which will consist of email distribution of the meeting date, time, and agenda at least one week prior to the meeting.	FINAL	Consensus			
2012-14	10/12/12	The Delta RMP's governance structure and process will not be defined by MOU but rather by a less formal set of agreements, such as those made at this meeting.	FINAL	Consensus			
2012-15	10/12/12	Some decisions that are time sensitive or less significant can be made via email or phone conference, but only if these items have previously been discussed in a Steering Committee meeting.	FINAL	Consensus			
2012-16	10/12/12	Meeting frequency will be once per month during the initial program development phase and quarterly after that.	FINAL	Consensus			

Record of Decision for the Delta RMP Steering Committee

2012-17	10/12/12	Remote participation in Steering Committee meetings will be allowed, where facilities are available, with the understanding that remote participation is less effective.	FINAL	Consensus			
2012-18	11/20/12	Revisit the question of adding a "Resource Agency" category, once DFG participation is clarified.	FINAL	Consensus			
2012-19	11/20/12	Categories for SFWCA and IEP to be named "Water Supply" and "Coordinated Monitoring".	FINAL	Consensus			
2012-20	11/20/12	Identify additional partners once the monitoring questions have been identified.	FINAL	Consensus			
2012-21	11/20/12	First approve the management questions, then form the TAC.	FINAL	Consensus			
2012-22	11/20/12	The SC will chose TAC chair and co-chair and select the TAC.	FINAL	Consensus			
2012-23	11/20/12	The TAC chair and co-chair will select candidates for the TAC and report back suggestions to the SC.	FINAL	Consensus			
2012-24	11/20/12	Use process of developing management questions from San Francisco Bay Nutrient Management Strategy as an example (take out "nutrients).	FINAL	Consensus			

Record of Decision for the Delta RMP Steering Committee

Number	Date	Decision	Meeting Summary Link	Type	Yes	No	Abstain
2013-1	01/23/13	Resource agency seat	FINAL	Consensus			
2013-2	01/23/13	One person to add to SC	FINAL	Consensus			
2013-3	01/23/13	The seat will be filled by the agency that stepped forward, i.e. CDFW	FINAL	Consensus			
2013-4	04/30/13	The Steering Committee will select two TAC co-chairs on June 4th among three candidates (Joe Domagalski, Stephen McCord, Mike Johnson)	FINAL	Consensus			
2013-5	06/04/13	The Steering Committee selected Joe Domagalski and Stephen McCord as the two TAC co-chairs.	FINAL	Consensus			
2013-6	06/04/13	Management questions: the final version was approved.	FINAL	Consensus			
2013-7	06/04/13	Template for RMP priorities review: the template was ok'd, provided that the discussion in the white papers will reflect the changes in language to the management questions.	FINAL	Consensus			
2013-8	09/23/13	ASC is the operational entity for the beginning period of the Delta RMP.	FINAL	Consensus			
2013-9	12/02/13	Move forward with planning and a design process for all issues presently on the table: methylmercury, nutrients, pathogens (Cryptosporidium/Giardia), and pesticides/toxicity.	FINAL	Consensus			
2013-10	12/02/13	Refine management questions for all issues.	FINAL	Consensus			
2013-11	12/02/13	<p>Provide a charge to the TAC to</p> <ul style="list-style-type: none"> • Further refine the management questions developed by the Steering Committee • Develop a monitoring design that looks at ambient conditions at the scale of the Delta • Identify opportunities for coordination (based on updated materials describing and mapping existing monitoring that have been developed by ASC) • Bring back a recommended approach 	FINAL	Consensus			

Record of Decision for the Delta RMP Steering Committee

Number	Date	Decision	Meeting Summary Link	Type	Yes	No	Abstain
2014-1	01/14/14	The assessment questions will be edited and finalized based on the edits and guidance provided during the discussion.	FINAL	Consensus			
2014-2	01/14/14	The primary focus of the toxicity assessment questions will be on pesticides. The initial screening mechanism will be to identify those current use pesticides that are most likely causing problems. The SC will be deciding on specific tests and an assessment approach based on the prioritized list. The TAC will then be tasked with developing a monitoring and study plan.	FINAL	Consensus			
2014-3	01/14/14	The roles and responsibilities of the TAC as described in the Delta RMP Committee Roles document were reviewed, discussed, and edited. The revised guiding principles and committee roles were approved pending the inclusion of the discussed edits.	FINAL	Consensus			
2014-4	03/04/14	The edits to the assessment questions were approved.	FINAL	Consensus			
2014-5	07/14/14	Implement a dashboard type tracking tool to improve tracking of deliverables and timelines.	FINAL	Consensus			
2014-6	07/14/14	Revise and refine the roles and responsibilities document further.	FINAL	Consensus			
2014-7	07/14/14	Revisit the TAC Co-Chair role and who fills that role.	FINAL	Consensus			
2014-8	09/29/14	Committee roles and responsibilities - The section on the Implementing Entity should be edited to clarify who are the staff and the Leadership team for the Delta RMP.	FINAL	Consensus			
2014-9	09/29/14	Committee roles and responsibilities - Add paragraph about the genesis of the program and what it is about.	FINAL	Consensus			
2014-10	11/07/14	Vote on priorities to be started within the first 6 months:	FINAL	Consensus			
2014-11	11/07/14	Mercury	FINAL	VOTE	0	0	10
2014-12	11/07/14	Nutrients	FINAL	VOTE	7	2	1
2014-13	11/07/14	Pesticides	FINAL	VOTE	7	3	0
2014-14	11/07/14	Pathogens	FINAL	VOTE	7	0	3
2014-15	11/07/14	Develop 6-month budget, assuming pro-rated costs based on availability of funding and in-kind contributions.	FINAL	Consensus			
2014-16	11/07/14	Ensure funding delivery (ASC's job).	FINAL	Consensus			
2014-17	11/07/14	There are no additional major issues to discuss with regards to the monitoring design, i.e. the designs are substantially done.	FINAL	Consensus			
2014-18	11/07/14	Committee roles and responsibilities - New program description narrative should be added as an "about us" section to RMP website and other opportunities for public display.	FINAL	Consensus			
2014-19	11/07/14	Linda Dorn and Adam Laputz were nominated and approved as the co-Chairs of the Delta RMP Steering Committee.	FINAL	Consensus			

Record of Decision for the Delta RMP Steering Committee

Number	Date	Decision	Meeting Summary Link	Type	Yes	No	Abstain
2015-1	01/22/15	The Steering Committee provisionally approved the Monitoring Design, for purposes of proceeding to implement the workplan for the remainder of fiscal year 14/15.	FINAL	Consensus			
2015-2	01/22/15	The Steering Committee accepted the recommendation from the TAC to use <i>Hyaella</i> for water toxicity testing but asked the TAC to provide additional technical information about evaluating and interpreting the data.	FINAL	Consensus			
2015-3	01/22/15	The Steering Committee approved the fiscal year 14-15 workplan for nutrients, specifically the allocation of \$35,000 to the startup of the high frequency data analysis, with the understanding that this work element will be completed in fiscal year 15/16. The Steering Committee requested that a sole-source justification for the USGS contract be prepared and added to the workplan. The Steering Committee generally agreed that there was sufficient justification to contract with USGS on a sole source basis due to the USGS' unique expertise, specialized experience, and access to unpublished sensor data.	FINAL	Consensus			
2015-4	01/22/15	The Steering Committee approved the FY14–15 workplan for pathogens, with the understanding that this work element will be completed in FY15–16. The Steering Committee requested a more formal sole-source justification for the pathogen labs in the workplan.	FINAL	Consensus			
2015-5	01/22/15	The Steering Committee approved the FY14–15 workplan for pesticides and toxicity, with the understanding that this work element will be completed in the subsequent fiscal year and with the budget will be reduced by \$4,500 since a RFP process for field sample collection will not be needed. The Steering Committee requested that sole-source justifications for the USGS lab contract and ATL toxicity contract be prepared and added to the workplan. The Steering Committee generally agreed that there was sufficient justification to contract with USGS on a sole source basis due to the USGS' unique technical capability to monitor a large list of pesticides. The Steering Committee generally agreed that there was sufficient justification to contract with ATL on a sole source basis due to the existing SWAMP contract with ATL for these services, which will allow the Delta RMP to access \$200,000 in SWAMP funds.	FINAL	Consensus			
2015-6	01/22/15	The Steering Committee agreed that toxicity testing continue to be conducted by ATL at least through the FY15-16, because of the negative impacts of switching laboratories in the middle of a sampling season.	FINAL	Consensus			
2015-7	01/22/15	The Steering Committee agreed that the full design for pesticide/toxicity monitoring should be implemented for 3 months in fiscal year 14/15 even though funding to implement that design in fiscal year 15/16 may not be authorized.	FINAL	Consensus			
2015-8	01/22/15	The Steering Committee agreed that ASC may contract the field sampling element of the pesticide/toxicity workplan without an RFP process because of the small size of the contract.	FINAL	Consensus			
2015-9	01/22/15	The Steering Committee agreed that the relative allocation of effort among program elements (e.g., nutrients, pesticides, mercury, and pathogens) and all program costs will be revisited as part of discussion of the FY 15-16 workplan.	FINAL	Consensus			
2015-10	01/22/15	The Steering Committee approved the FY 14-15 budget for administration, governance, and communications.	FINAL	Consensus			
2015-11	01/22/15	ASC shall implement appropriate funding mechanisms (e.g., invoice, contract) as needed to meet the needs of different Delta RMP members.	FINAL	Consensus			
2015-12	03/27/15	An update on the status of agenda items should be part of the agenda for future meetings.	FINAL	Consensus			
2015-13	03/27/15	Reports from the TAC to the SC should clearly specify which recommendations were made by consensus and lay out issues and pros/cons that were discussed.	FINAL	Consensus			
2015-14	03/27/15	Toxicity testing using <i>Hyaella</i> will not be included in the FY14/15 monitoring. The funding that would have been used for FY14/15 monitoring will be diverted to the SCCWRP interlaboratory comparability study if ATL needs funding to participate. The Delta RMP will collect field samples for the interlaboratory comparability study if needed.	FINAL	VOTE	10	0	0
2015-15	03/27/15	Any additional comments on the Monitoring Design should be submitted by adding them to the Response to Comments matrix prepared by ASC.	FINAL	Consensus			
2015-16	03/27/15	The date, time, and agenda for all SC and TAC meetings should be publicly noticed when these meetings are scheduled.	FINAL	Consensus			
2015-17	03/27/15	The FY14/15 Workplan, as amended during the meeting, was approved.	FINAL	VOTE	9	0	1
2015-18	03/27/15	The Delta RMP "Financial Management Plan", as amended by the SC, was approved.	FINAL	VOTE	8	0	2
2015-19	03/27/15	Stephen McCord and Joe Domagalski should continue as TAC Co-Chairs until June 30, 2015. Stephen McCord will be paid by Regional San.	FINAL	VOTE	10	0	0
2015-20	03/27/15	The Delta RMP "Committee Roles" document as presented at the 3/27/15 meeting was approved.	FINAL	VOTE	9	0	1

Record of Decision for the Delta RMP Steering Committee

Number	Date	Decision	Meeting Summary Link	Type	Yes	No	Abstain
2015-21	06/16/15	January and March summaries as amended approved.	FINAL	VOTE	10	0	0
2015-22	06/16/15	The agenda package for the Steering Committee should be posted on the Regional Board's Delta RMP website in advance of the meeting with the exception of draft meeting summaries, which will be emailed to the Steering Committee directly. The Regional Board's website will have a note saying that "Draft meeting summaries are available upon request from the Regional Board".	FINAL	Consensus			
2015-23	06/16/15	TAC TIE subcommittee members are confirmed for the duration of the FY15/16 workplan; their term is to end in June 2016.	FINAL	Consensus			
2015-24	06/16/15	Approve the Monitoring Design dated 6/7/2015 as amended at the 6/16/15 meeting.	FINAL	VOTE	10	0	0
2015-25	06/16/15	Approve the FY15/16 Budget and Workplan as proposed, with the understanding that there will be a check-in before the second six-months of the fiscal year and that additional nutrient studies will be moved to the top of the list for studies to be completed when additional funds are available.	FINAL	VOTE	10	0	0
2015-26	06/16/15	The Steering Committee approves sending the completed QAPP as soon as possible to the SWAMP Quality Assurance Officer for review and beginning pesticide/toxicity monitoring immediately upon SWAMP approval of the toxicity portion of the QAPP.	FINAL	VOTE	8	0	2
2015-27	07/22/15	Approve FY15/16 detailed workplan as amended with minor comments.	(over email)	VOTE	7	0	0

DECISION#	MOTION	Who	Seconded	Result	#Yes	#No	#abstained	VOTE	CATEGORY	Reg - State	Reg - Federal	Coord. Monitoring	Phase I	Phase II	POTWs	POTWs	POTWs	Agriculture	Agriculture	Water Supply	Resource Age
										SC MEMBER or ALTERNATE	Adam Laputz Pamela Creedon	Tim Vendlinski Valentina Cabrera	Greg Erickson Erwin v. Nieuwenhuys	Dave Tamayo Dalia Fadl	Stephanie Reyna Brandon Nakagawa	Linda Dorn Debbie Webster, Tony Pirondini, Nader Shareghi Jenny Skrel, Vyomini Upadhyay, Casey Wichert	Erich Delmas Josie Tellers	Mike Wackman Bruce Houdesheldt	David Cory Parry Klassen	Val Connor/Lynda Smith Stephanie Fong	
2015-14	Divert funding that was assigned to hyalella testing to interlab study; the involvement would include field samples as needed to participate in the study (if APHL needs funding)	Adam Laputz		approved	10	0	0			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2015-17	FY14/15 Workplan, as amended during the meeting	Stephanie Hiestand	Adam Laputz	approved	9	0	1			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	abstained		Yes	
2015-18	Delta RMP "Financial Management Plan", as amended by the SC			approved	8	0	2			abstained	abstained	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
2015-19	Stephen McCord and Joe Domagalski to continue as TAC Co-Chairs until June 30, 2015.			approved	10	0	0			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
2015-20	Delta RMP "Committee Roles" document January and March summaries as amended approved.	Stephanie Hiestand		approved	9	0	1			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		abstained	
2015-21	Approve the Monitoring Design dated 6/7/2015 as amended at the 6/16/15 meeting.	Linda Dorn		approved	10	0	0			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
2015-24	Approve the FY15/16 Budget and Workplan as proposed, with the understanding that there will be a check-in before the second six-months of the fiscal year and that additional nutrient studies will be moved the top of the list for studies to be completed when additional funds are available.	Dave Tamayo	Linda Dorn	approved	10	0	0			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
2015-25	The Steering Committee approves sending the completed QAPP as soon as possible to the SWAMP Quality Assurance Officer for review and beginning pesticide/toxicity monitoring immediately upon SWAMP approval of the toxicity portion of the QAPP.	Adam Laputz	Tim Vendlinski	approved	10	0	0			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
2015-26	Approve FY15/16 detailed workplan as amended with minor comments.	Dave Tamayo	Stephanie Hiestand	approved	8	0	2			Yes	Yes	abstained	Yes	Yes	Yes	Yes	Yes	abstained		Yes	
2015-27	Add a second seat for Agriculture to the Steering Committee.	(voted over email)		approved	7	0	0			Yes	Yes	abstained	Yes	Yes	Yes	Yes	abstained	abstained		Yes	
2015-28	Approve minutes from June 16, 2015, as amended.	Val Connor	Josie Tellers	approved	10	0	0			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
2015-29	Establish a Finance Subcommittee to review Program budgets and look for cost savings that could be implemented in the next workplan. The committee will have one representative each from water supply, agriculture, wastewater, and stormwater.	Val Connor	Josie Tellers	approved	10	0	1			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	abstained	Yes	
2015-30	Establish a Revenue Subcommittee to identify new sources of funding for the Program, especially grants. The committee will consist of Val Connor, Linda Dorn, and Gregg Erickson.	Mike Wackman	Adam Laputz	approved	11	0	0			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2015-31		Mike Wackman	Adam Laputz	approved	11	0	0			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



To: Delta RMP Technical Advisory Committee

From: Philip Trowbridge, RMP Manager

Re: Nutrients Synthesis – Identification of Critical Monitoring Data Gaps

Date: November 10, 2015

In the approved FY15/16 Workplan, the Steering Committee allocated \$50,000 to synthesize recent reports related to nutrients in the Delta. The planned approach was to convene an ad hoc workgroup of technical experts to review the reports and make recommendations about:

- The highest priority monitoring tasks that could begin in FY16/17 (up to the expected budget for nutrient monitoring in FY16/17); and
- Research questions that need to be addressed for ongoing monitoring plan development in subsequent years.

Implementation of this plan is complicated by the fact that several of the key documents for the review have been delayed. The workgroup findings must be ready by March 2016 to help form the FY16/17 workplan and budget. White papers on macrophytes, cyanobacteria, and modeling from the Regional Board's Nutrient Research Plan process will be ready in early 2016, but the white paper on the "ammonia paradox" will not. A prioritization process by the STAG may also be delayed.

Nearly half of the budget for this task is for expert panelists. It does not make sense to hire these panelists to review an incomplete docket of reports. Therefore, ASC recommends splitting the project into two subtasks:

- In early 2016, determine the highest priority monitoring tasks for FY16/17 with a small group of local experts and stakeholders; and
- In late 2016, develop recommendations for ongoing monitoring plan developing over multiple years with an expert panel after all the relevant documents are available.

The attached outline is a proposal for how to achieve these two objectives in a step-wise manner.

Nutrient Synthesis Subtask – FY16/17 Monitoring Recommendations

Objectives

Develop “no regrets” recommendations for the Delta RMP nutrient monitoring program for FY16/17.

Documents to Review

- ASC: Synthesis of EMP Data, Nutrient Loads, Stable Isotope, and DSM2 Nutrient Models (ASC-DWR contract)
- USGS: Synthesis of High-Frequency Sensor Data (Delta RMP FY14/15 Study)
- RB5: White Papers for the Central Valley Nutrient Research Plan
 - Macrophytes (and knowledge gaps document)
 - Cyanobacteria (and knowledge gaps document)
 - Modeling
 - Drinking Water

Outputs

- 1-2 meetings of the TAC Nutrient Subcommittee in January 2016
- A final report with detailed proposals for the highest priority monitoring tasks that could begin in FY16/17 (up to the expected budget for nutrient monitoring in FY16/17).

Draft Outline of Final Report

1. Introduction
2. Goals of the Delta RMP Nutrient Monitoring Program
3. Approach and Timeline for Program Development
4. Past and Ongoing Monitoring Activities in the Delta
 - a. Inventory
 - b. Results of Synthesis Studies
5. Inventory of Potential Monitoring Elements
6. Initial Recommendations
 - a. Recommendations for FY16/17 Monitoring
7. Next Steps
8. References

Workgroup Members

Members of the TAC Nutrient Subcommittee plus additional local experts who are involved with the Delta RMP and the Delta Science Program as needed.

Schedule

11/16/15: TAC review of outline

12/18/15: SC approval of outline, SC sets approximate budget for nutrients in FY16/17

By 1/31/16: 1-2 meetings of TAC Nutrients Subcommittee

3/1/15: Draft report for TAC review

4/1/15: Draft report for SC review and consider relative to FY16/17 workplan decisions

6/30/15: Final report

Budget

A total of \$50,000 was allocated to this task in the FY15/16 workplan (\$20,000 for honoraria, \$30,000 for labor). Less than half of the total budget will be needed for this subtask. It is proposed to expend \$15,000 in ASC labor to convene the TAC Nutrient Subcommittee and prepare the workplans for FY16/17 monitoring.

Nutrient Synthesis Subtask – Multi-Year Monitoring Design

Objectives

Identify key data gaps and make recommendations about how those data gaps could be addressed through monitoring over multiple years.

Documents to Review

- ASC: Synthesis of EMP Data, Nutrient Loads, Stable Isotope, and DSM2 Nutrient Models (ASC-DWR contract)
- ASC: Synthesis of Nutrient Data and Analyses to Determine Delta Segments for Nutrient Assessment and Modeling (ASC-DSP contract, expires 6/30/16)
- USGS: Synthesis of High-Frequency Sensor Data (Delta RMP FY14/15 Study)
- RB5: White Papers for the Central Valley Nutrient Research Plan
 - Macrophytes (and knowledge gaps document)
 - Cyanobacteria (and knowledge gaps document)
 - Modeling
 - Drinking Water
 - “Ammonium Paradox”
 - STAG Priorities for Central Valley Nutrient Research Plan

Outputs

- 2-Day Workshop with an Expert Panel in the second half of 2016. The workshop will be open to all but panelists will be called on first to give their feedback.
- A final report with recommendations for ongoing monitoring plan development.

Draft Outline of Final Report

1. Introduction
2. Goals of the Delta RMP Nutrient Monitoring Program
3. Approach and Timeline for Program Development
4. Past and Ongoing Monitoring Activities in the Delta
 - a. Inventory
 - b. Results of Synthesis Studies
5. Inventory of Potential Monitoring Elements
6. Initial Recommendations
 - a. Recommendations for FY16/17 Monitoring
 - b. Recommendations for Ongoing Monitoring Program Development**
7. **Coordination Opportunities**
 - a. Delta Nutrient Research Plan and Management Questions**
 - b. Nutrient Management Strategy for San Francisco Bay**
8. Next Steps
9. References

Note: text is **bold** denotes sections to be added to the report from the first subtask.

Workgroup Members

The members will be selected to ensure that the workgroup contains members with the following expertise or affiliations:

- Nutrient Biogeochemistry
- Phytoplankton/HABs
- Sensors for Continuous Nutrient Monitoring
- Central Valley Regional Water Quality Control Board (Nutrient Research Plan)
- Interagency Ecological Program (Nutrient Monitoring)
- Nutrient Management Strategy for San Francisco Bay
- Delta RMP TAC Nutrient Subcommittee

Schedule

11/16/15: TAC review of outline

12/18/15: SC approval of outline, SC sets approximate budget for nutrients in FY16/17

By 10/31/16: Workshop with expert advisors

By 12/31/16: Draft report to TAC and SC for consideration with Multi-Year Planning

By 3/31/16: Final report to TAC and SC for consideration with FY17/18 budgeting

Budget

A total of \$50,000 was allocated to this task in the FY15/16 workplan (\$20,000 for honoraria, \$30,000 for labor). The \$20,000 for honoraria and \$15,000 in labor will be used for this task.



DATE: November 10, 2015
TO: Delta RMP Technical Advisory Committee
FROM: Thomas Jabusch, ASC
RE: Potential Adjustments to Monitoring Design for FY16/17?

REQUESTED ACTION

TAC recommendation for adjustments to the Monitoring Design.

EXPLANATION

The Monitoring Design was approved in June 2015. Per our planning cycle, the TAC should review the Monitoring Design each year to prepare for the Multi-Year Planning discussion by the SC. The SC's first multi-year planning discussion is scheduled for December 18. The desired outcome of the November 18 agenda item is to develop recommendations for adjustments to Monitoring Design for FY16/17 on onwards. However, monitoring for the first year of implementation is still in progress and no complete datasets are available for review to inform whether changes are needed to the Monitoring Design. Therefore, the proposed agenda item is limited to a discussion of a few relatively small adjustments that have been suggested:

- Edit to pesticide assessment question #2
- Additional CUPs to consider for inclusion in target analyte list
- Sampling site representativeness at Buckley Cove
- Design changes and/or additional follow-up studies for pathogens

POTENTIAL ADJUSTMENTS TO MONITORING DESIGN FOR FY16/17

Suggested edit to Pesticide Assessment Questions from Table 1 of the Monitoring Design (new text underlined)

(From 06/06/15 TAC call)

2. What are the spatial/temporal distributions of concentrations of currently used pesticides identified as likely causes of observed toxicity or with the highest risk potential?

Additional CUP/analytes that have been suggested for inclusion in the target analyte list

- Dichlorvos
 - Naled is used regularly in vector control across the region and breaks down quickly to dichlorvos, which causes aquatic toxicity. More generally, TAC members are suggesting continuously updating the list of analytes to reflect changes in compounds used in vector and SAV control.
- Glyphosate
 - Monthly spraying by Department of Boating and Waterways across Delta to control water hyacinth. Likely cause for algal toxicity detected by SJ & Delta coalition monitoring.
- Nonylphenol
 - Surfactant with an endocrine function that is also a major degradate of pesticide adjuvants in pesticide formulations that are extensively used in and around the Delta. Has been detected in samples collected in the Delta.
- 2,4,-D and 2,4,5,-T
 - 2,4-D is widely used across the Central Valley. The estimate half-life in aqueous solutions is 15 days and has been considered to be highly toxic to fish. The LC50 for cutthroat trout is estimated at 1.0-100mg/L. 2,4,5-T while banned in California may still have limited releases from private individuals still using the compound.
- FDOM (colored dissolved organic matter fluorescence)
 - Measure of carbon quality. Among other things, can help to indicate proportion of effluent contained in a sample.

Sampling site representativeness at Buckley Cove

USGS field crews and TAC members have noted the potential for non-representative results from sampling along the shoreline at the San Joaquin River at Buckley Cove site. The proposal is to change the location and/or the sampling method at this site to address this concern. Additional details will be provided by USGS.

Design changes and/or additional follow-up studies for pathogens

Members of the Pathogen Subgroup have begun compiling and evaluating the available ambient and water intake monitoring data, and tentatively plan to assess data in March 2016 to evaluate if any special studies are needed. There is a conference call with the entire Pathogen Subgroup scheduled for November 17, to provide an update of monitoring results to-date, and discuss the approach to assess data and evaluate if additional studies are needed. Any requests for additional funding would come after this assessment, and the funding would be most likely be requested for the later part of FY 16/17.

NEXT STEPS

The process will be:

1. TAC recommends changes to the Monitoring Design
2. SC approves updated Monitoring Design
3. ASC incorporates changes to Monitoring Design into FY16/17 workplan and budget, staying within the general allocations set by the SC in December.

DRAFT