Steering Committee Meeting Agenda

August 5, 2019 10:00 am – 3:30 pm

Location
Large Conference Room, Department of Water Resources
3500 Industrial Blvd #131, West Sacramento, CA 95691

Remote Access
Call-in: 415-594-5500, Access Code: 238-626-034#
Online: https://join.me/sfei-conf-cw2

#	Agenda item and desired outcomes	Attachments	Start & Lead
1	**Introductions and Review Agenda** Introduce TAC and SC members, establish quorum, and explain goals of the meeting.		10:00 Adam Laputz
2	**Decision:** Approve meeting summary from the previous meeting and confirm/set upcoming meeting dates. **Desired outcomes:** • Approve meeting summary • Set a teleconference date shortly after the Sept 13, 2019 TAC meeting • Set meeting dates for around November 2019 and February 2019 **(Please bring your calendar to the meeting!)**	Draft Summary of May 29, 2019 SC Meeting	10:05 Adam Laputz
3	**Information: Technical Advisory Committee update** Updates on TAC meetings held in June 2018. **Desired outcome:** • Inform committee on monitoring activities and TAC and subcommittee activities.	Draft Summary of June 19, 2019 TAC Meeting (to be distributed if available on time)	10:05 – 10:30 Stephen McCord

#	Agenda item and desired outcomes	Attachments	Start & Lead
4	**Information: Delta RMP finances** The Finance Update memo summarizes Delta RMP revenues, expenses, and the status of the reserve fund. The Finance Committee will report out on its findings and recommendations. **Desired outcomes:** • Informed committee	Quarterly Finance Memo (to be reviewed by Finance Committee on July 29)	10:30 – 11:00 Matthew Heberger Dan Riordan
5	**Discussion: Forthcoming Pyrethroids TMDL and Basin Plan Amendment** Staff of the Central Valley Regional Water Quality Control Board are a preparing to establish Total Maximum Daily Loads (TMDL) for waterbodies that are listed for pyrethroids on the Clean Water Act Section 303(d) list, with a goal to control of pyrethroid pesticides that are impacting or could potentially impact aquatic life uses in surface waters in the Sacramento and San Joaquin River watersheds of the Central Valley. Danny McClure will give a presentation on the TMDL development with time for questions and discussion. **Desired outcome:** • SC guidance on whether and how the Delta RMP can support this project	Webpage on the Pyrethroids TMDL and Basin Plan Amendment	11:00 – 12:00 Danny McClure
	Lunch (provided)		12:00 – 1:00
6	**Governance/Charter Reforms** As the Delta RMP matures, it is appropriate to revisit the management and governance to ensure that we are continuing to fulfill the program's goals and objectives. These include "producing objective and cost-effective scientific information" in a manner that it is open, transparent, and collaborative. Several stakeholders have come forward with recom-mendations for improving the program's governance to discuss with the Steering Committee. **Desired outcome:** • SC recommendation on next steps to implementing governance reforms. • Formation of a subcommittee to tackle these questions?		1:00 – 2:00 Mike Wackman

#	Agenda item and desired outcomes	Attachments	Start & Lead
7	**Follow up on the Long-Range Planning Workshop** Time for a short discussion to follow up on the July 31 workshop. **Desired outcome:** • Confirm the priority projects and focus areas identified at last week's workshop • Confirm any direction or action items and timelines		2:00 – 2:30 Adam Laputz
8	**Update on the Pesticides Interpretive Report** Our consultant Deltares has produced three sets of deliverables, including the database and a technical memo describing their planned approach, and held a meeting with Delta RMP stakeholders on July 15. Staff asked the contractor wait for a "notice to proceed" pending final TAC review of the data and methods. Further, there was concerns over wording which the co-chair requested be brought to the SC for a decision. **Desired outcome:** • Provide direction to our contractor Deltares regarding the wording related to ecotoxicological thresholds.	July 19 memo on wording in pesticides interpretive report by Deltares	2:30 – 3:00 Matt Heberger
9	**Project Progress Update** Report by ASC on the implementation of the workplan to date, to include updates on proposal development and quality assurance plans. **Desired outcome:** • Informed committee regarding the status of Delta RMP deliverables.	Delta RMP Stoplight Reports - PDF in agenda package, links to: • Action Items • Deliverables Dashboard of monitoring events and datasets (PDF in agenda package, live link here).	3:00 – 3:25 Matt Heberger
10	**Wrap up** Review action items Suggest agenda items for next meeting		3:25 Adam Laputz
	Adjourn		**3:30**

Materials for Agenda Item 8

MEMO

To: Delta RMP Technical Advisory Committee

From: Matthew Heberger, SFEI

Date: July 19, 2019

Re: Wording in pesticides interpretive report by Deltares

At our meeting with the scientists from Deltares on Monday, there was a debate about the most appropriate wording for the numeric values used to evaluate whether chemicals in the environment are toxic. Should we call these thresholds, benchmarks, triggers, screening levels...? We agreed to draft text for inclusion in the report and provide it to the contractor, and to discuss it at the July 19 TAC meeting. Here is draft the draft language provided by Debra Denton and Danny McClure:

> "Toxicity threshold values are needed to interpret monitoring data with respect to whether there is potential risk to aquatic life from pesticides. In this report "threshold values" are concentrations of a pesticide above which there is concern that the pesticides 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 these are not State water quality objectives and are based only on the available ecotoxicity data."

Steering Committee co-chair Debbie Webster suggests replacing the word "threshold" with "screening level" or "screening value." She wrote that, the "proposed language does not alleviate this concern regarding the definition of "threshold" and I think we need to use a different word. CVCWA recommended the use of screening levels. "Screening levels" and "screening values" are common terms in risk assessment and is used by USEPA and others.

Given the above (disagreement within the TAC and regulatory implications), this is an issue that requires input from the Delta RMP Steering Committee. While discussion at the TAC meeting is appropriate, this is not an issue where the decision should be made by the TAC.

For what it is worth, here is what SFEI scientists wrote in a recent draft report on CECs in the Bay:

> "In order to determine whether contaminants were present in concentrations that are ecologically relevant, i.e., those which may cause harm to aquatic biota, we compared observed concentrations with thresholds for aquatic toxicity gathered from several sources. The presence of a compound above a threshold is not necessarily evidence that harm is taking place, but rather it is a first step in a process for interpreting the data and evaluating relative ecological risk."

In *Current-Use Pesticides and Wastewater Contaminants in San Francisco Bay Margin Sediment and Water*. San Francisco Estuary Institute, Richmond, California, in review.

Materials for Agenda Item 9

Past & Planned Monitoring Events

Table last updated 7/11/2019

Mercury

Fiscal Year	Date	Monitoring Element	# Sites Sampled	Comments
FY16-17	Aug 22-23, 2016	Mercury, Water	5	
FY16-17	Aug 22-23, 2016	Mercury, Fish	5	
FY16-17	Sept 13, 2016	Mercury, Fish	6	
FY16-17	Nov 14-15, 2016	Mercury, Water	5	
FY16-17	Feb 28, 2017	Mercury, Water	5	
FY16-17	April 25, 2017	Mercury, Water	5	
FY17-18	Aug 14-18, 2017	Mercury, Fish	6	
FY17-18	Oct 18-19, 2017	Mercury, Water and Sediment	6	6 sites sampled for both water and sediment
FY17-18	Jan 29-30, 2018	Mercury, Water and Sediment	8	8 sites sampled for water, 6 sites for sediment
FY17-18	Feb 26-27, 2018	Mercury, Water	8	
FY17-18	Mar 19-20, 2018	Mercury, Water	8	
FY17-18	Apr 16-18, 2018	Mercury, Water and Sediment	8	8 sites sampled for water, 6 sites for sediment
FY17-18	May 15-16, 2018	Mercury, Water	8	
FY17-18	Jun 20-21, 2018	Mercury, Water and Sediment	8	8 sites sampled for water, 6 sites for sediment
FY18-19	Jul 9-10, 2018	Mercury, Water	8	Sediment sampling conducted for one year only; dropped in FY18-19
FY18-19	Aug 13-14, 2018	Mercury, Water	8	
FY18-19	Sept 2018	Mercury, Water	8	
FY18-19	Oct 2018	Mercury, Water	8	
FY18-19	Aug 20-22, 2018	Mercury, Fish	7	
FY18-19	Jan 21-22, 2019	Mercury, Water	8	
FY18-19	Feb 18-19, 2019	Mercury, Water	8	
FY18-19	Mar 20-21, 2019	Mercury, Water	8	
FY18-19	Apr 22-23, 2019	Mercury, Water	8	
FY18-19	May 20-21, 2019	Mercury, Water	8	
FY18-19	Jun 17-19, 2019	Mercury, Water	8	
FY19-20	Planned Jul 15-16, 2019	Mercury, Water	8	
FY19-20	Planned Aug 5-8, 2019	Mercury, Fish	7	
FY19-20	Planned Aug 12-15, 2019	Mercury, Fish	0	Followup sampling if necessary
FY19-20	Planned Aug 13-14, 2019	Mercury, Water	8	
FY19-20	Planned Sep 16-17, 2019	Mercury, Water	8	
FY19-20	Planned Oct 14-15, 2019	Mercury, Water	8	
FY19-20	Planned March 2020	Mercury, Water	6	2 sites will be dropped in 2019
FY19-20	Planned April 2020	Mercury, Water	6	
FY19-20	Planned May 2020	Mercury, Water	6	
FY19-20	Planned June 2020	Mercury, Water	6	

Dates for future monitoring events to be planned by ASC and MLML staff in collaboration with Mercury Subcommittee

Year →	2016						2017						2018						2019						2020					
Fiscal Yr →	FY 16-17												FY17-18												FY18-19					
Month →	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
Monitoring element (# of sites sampled)																																				
Fish		6											6												7											
Water		5			5			5		5						6			8	8	8	8	8	8	8	8	8	8				8	8	8	8				6	6	6	6
Sediment																6			6			6		6																

Pesticides

Fiscal Year	Date	Monitoring Element	# Sites Sampled	Comments
WY2019	Dec 18-19, 2018	Pesticides	6	First Flush - first event to coincide with first major fall/winter storm. At each event, sample 4 random (GRTS) sites and and the 2 fixed sites.
WY2019	Feb 4-6, 2019	Pesticides	6	Second Winter Storm
WY2019	April 29-30, 2019	Pesticides	6	Third Winter Storm or Spring Snowmelt runoff prior to irrigation
WY2019	June 17-18	Pesticides	6	Spring
WY2019	Planned July 22-23	Pesticides	6	Summer
WY2019	Planned Sept 16-17	Pesticides	6	Fall
WY2020	Planned fall/winter 2020	Pesticides	6	First Flush

WY2020	Planned winter 2020	Pesticides	6	Second Winter Storm
WY2020	Planned winter/spring 2020	Pesticides	6	Third Winter Storm or Spring Snowmelt runoff prior to irrigation
WY2020	Spring 2021	Pesticides	6	Spring
WY2020	Summer 2021	Pesticides	6	Summer
WY2020	Fall 2021	Pesticides	6	Fall
	Dates for future monitoring events to be planned by ASC and USGS staff in collaboration with Pesticides Subcommittee.			
	See QAPP Table 6.7 for further details of sampling triggers.			

Nutrients

Fiscal Year	Date	Monitoring Element	# Sites Sampled	Comments
FY17-18	Sept 19-21, 2017	Nutrients High-Frequency Cruise (3 consecutive days)	n/a	First of 3 planned sets of 3-day cruises. One of the instruments did not work properly, so Days 2 & 3 were cancelled. Monitoring will continue in the spring and summer of 2018.
FY17-18	May 15-17, 2018	Nutrients High-Frequency Cruise (3 consecutive days)	n/a	Repeat of first cruise which was cancelled due to equipment failure.
planned and funded in FY17-18	July 24, 25, 26, 2018	Nutrients High-Frequency Cruise (3 consecutive days)	n/a	Second cruise (done)
planned and funded in FY17-18	Oct 16, 17, 18, 2018	Nutrients High-Frequency Cruise (3 consecutive days)	n/a	Third cruise (planned)
	The USGS Biogeochemical Research Group has completed all 3 of the planned cruises, and is analyzing data and writing a report.			
FY18-19	Aug 16-30, 2019	Chlorophyll-a Sensor Intercalibration, Deployment #1	1	Sensors from different agencies were deployed side-by-side for 2 weeks to compare their measurements; Deployment #1, San Joaquin River at Mossdale Bridge
FY18-19	Sept 27 - Oct 10, 2019	Chlorophyll-a Sensor Intercalibration, Deployment #2	1	Deployment #2, Liberty Island Buoy in Cache Slough, USGS Station 11455315
FY18-19	May 7, 2019	Chlorophyll-a Laboratory Intercalibration, Sampling Event #1	1	First of 3 planned sampling events; samples will be split and triplicates sent to each lab "round robin" style
FY18-19	July 9, 2019	Chlorophyll-a Laboratory Intercalibration, Sampling Event #2	1	Second of 3 sampling events
FY18-19	Planned Aug 20, 2019	Chlorophyll-a Laboratory Intercalibration, Sampling Event #3		Third sampling event, planned date

CECs

Detailed planning for CEC monitoring is currently underway. Sampling planned to begin for the FY19-20 pilot study in the fall of 2019.

Fiscal Year	Date	Monitoring Element	# Sites Sampled	Comments
FY19-20	Planned Aug 12-15, 2019	Fish sampling, annual	4	Coordinated with mercury sportfish sampling
FY19-20	TBD	Water Sampling Event #1	8	Not currently funded.
FY19-20	TBD	Water Sampling Event #2	8	Study design calls fro 2 dry-weather and 2 wet-weather events spaced about equally throughout the year
FY19-20	TBD	Water Sampling Event #3	8	DWR-MWQI will sample 5 sites by boat; SFEI will sample 3 sites from bridge/shoreline.
FY19-20	TBD	Water Sampling Event #4	8	We will attempt to sync the dates between the two crews to the extent possible.
FY19-20	TBD	Bivalve (clam) Sampling, annual	6	
FY19-20	TBD	Sediment sampling, annual	3	

Status of Delta RMP Datasets		
Table last updated:	7/11/2019	
Parameter group	**Published?**	**Explanation**
Pesticides		
FY15-16 July 2015 - June 2016 Current Use Pesticides	✓	Published and publicly available via CD3, CEDEN, and NWIS
FY 15-16 field measurements (temperature, pH, DO, etc.) for Current Use Pesticides	✓	Published and publicly available via CD3, CEDEN
FY16-17 July 2016 - June 2017 Current Use Pesticides	✓	Published and publicly available via CD3, CEDEN, and NWIS
FY 16-17 field measurements (temperature, pH, DO, etc.) for Current Use Pesticides	✓	Published and publicly available via CD3, CEDEN
WY2019 Current Use Pesticides	☐	First samples collected Dec 19, 2018. Samples have been processed and t analyzed. Provisional data for the first 3 sampling events has been shared with the TAC and workgroups. As of 7/11/2019, USGS staff are working on compiling the data in CEDEN format for transmission to ASC for formatting and QA. The data will be QA'd in two batches (first 3 events, second 3 events).
Toxicity		
FY15-16 Aquatic Toxicity Results	✓	Published and publicly available via CD3 and CEDEN
FY16-17 Aquatic Toxicity Results	✓	Published and publicly available via CD3 and CEDEN
WY 2019 Aquatic Toxicity Results	☐	First samples collected in Dec 19, 2018. Provisional data has been shared with the TAC and workgroups. The data is being managed and the QA performed by staff at the State Water Resources Control Board, Office of Information Management and Analysis. For further information, please do not contact the staff at Aquatic Health Program Laboratory at UC Davis. Rather, contact the contract manager, Melissa Morris at the State Water Board.
Mercury		
FY16-17 Fish, Water, and Sediment	✓	Published and publicly available via CD3 and CEDEN
FY17-18 Fish, Water, and Sediment	☐	As of July 2019, data undergoing final QA. This is about 3 months behind schedule as the lab submission was missing certain data, and the project manager instructed data services staff to wait until the full dataset was available. * Fish data uploaded * Sed ready to be uploaded with Water * Water has undergone QA Review and is pending finalization- QA officer found problem and had to request extra information from lab
FY18-19 Fish, Water	☐	Sampling underway; fish tissue data have undergone QA, water data collection not yet complete and not yet received from lab.
Nutrients		
FY17-18 High-Frequency Monitoring	☐	USGS to handle all data management and QA of the high-frequency data (very large datasets). Planned to upload these to a public repositor. Data available upon request from PI Brian Bergamaschi, bbergama@usgs.gov.

FY18-19 Chlorophyll-a Sensor Intercalibration	n/a	No plans to publish these data in CEDEN. Data from the intercalibration exercise will be available upon request upon study completion; contact Matthew Heberger, matth@sfei.org
Pathogens		
FY15-16 Pathogens	✓	Published and publicly available via CD3 and CEDEN
FY16-17 Pathogens	✓	Published and publicly available via CD3 and CEDEN
No further pathogens monitoring planned.		

Delta RMP Deliverables

Key to Status Colors:
Checkmark indicates complete.
Green indicates that there are over 90 days until the deliverable is due.
Yellow indicates a deliverable is due in less than 90 days.
Red indicates a deliverable that is overdue.

	Task	Deliverable	Assigned To	Due Date	Status	Comments
1	**FY17/18 Delta RMP Workplan**					
2	**3. Quality Assurance**					
3	3.A. Quality Assurance	Revised QAPP for FY18-19	Matthew Heberger	09/30/18	✓	Distributed to signatories on Nov 21, 2018.
4	3.A. Data Management and QA Standard Operating Procedures	Submit Standard Operating Procedures (due to SWAMP QAO on July 1, 2018)	Matthew Heberger	06/30/18	✓	Requested by Melissa Morris, SWAMP QA Officer, as a condition of approving QAPP.
5	**4. Communications**	"Pulse of the Delta" Draft	Matthew Heberger	06/30/20		As of Dec 2018, the SC has approved the main themes and an outline. SC decided to push back publication of report to 2020. Note that budget does not include layout or design.
6	**8. Pesticides Interpretive Report**					
7	8.B. Contract Management	RFP for Pesticides/Toxicity Interpretive Report	Matthew Heberger	11/15/17	✓	RFP issued in in spring 2018, proposals due March 16.
8	8.B. Contract Management	Signed contract and scope of work	Matthew Heberger	03/31/18	✓	
9	**8.A. Interpretive Report (Deltares)**					
10	8.A.1. Stakeholder Engagement & Input					
11	8.A.1. Stakeholder Engagement & Input	M1.1. Meeting #1: Kickoff meeting with contract manager (ASC)	Erwin Roex	07/01/18	✓	Kickoff meeting between Matt and Erwin held on July 12, 2018 via Skype.
12	8.A.1. Stakeholder Engagement & Input	M1.2. Meeting #2, In-person with stakeholders to discuss overall approach and data compilation	Erwin Roex	09/25/18	✓	Meeting held on morning of Sept 25 at Regional San.
13	8.A.1. Stakeholder Engagement & Input	D1.3. Presentation at stakeholder meeting #2	Erwin Roex	09/25/18	✓	Erwin's Powerpoint slide presentation was distributed to the Pesticides Subcommittee and TAC following the meeting.
14	8.A.1. Stakeholder Engagement & Input	D1.4 Minutes of stakeholder meeting #2	Erwin Roex	10/15/18	✓	Matt H. wrote up a meeting summary, saving Deltares from having to complete this step.
15	8.A.1. Stakeholder Engagement & Input	M1.3. Meeting #3, In-person meeting with Deltares to present data and methods to TAC	Erwin Roex	12/10/18	✓	Postponed to Dec 10, 2018.
16	8.A.1. Stakeholder Engagement & Input	D1.5 Presentation at meeting #3	Erwin Roex	12/10/18	✓	
17	8.A.1. Stakeholder Engagement & Input	D1.6 Minutes of meeting #3	Erwin Roex	12/17/18	✓	
18	8.A.1. Stakeholder Engagement & Input	M1.4. Meeting #4: Teleconference to discuss Draft Report	Erwin Roex	03/31/19		
19	8.A.1. Stakeholder Engagement & Input	D1.7 Presentation at Meeting #4	Erwin Roex	03/31/19		
20	8.A.1. Stakeholder Engagement & Input	D1.8 Minutes of Meeting #4	Erwin Roex	04/15/19		
21	8.A.2. Compilation of existing data and literature					
22	8.A.2. Compilation of existing data and literature	D 2.1: Summary of the definitive data set.	Erwin Roex	12/24/18	✓	As of Oct 19, 2018, State Board staff are still making adjustments to the Delta RMP toxicity data, preventing Deltares from finalizing their analysis.
23	8.A.2. Compilation of existing data and literature	D 2.2: Excel file containing the definitive database with both pesticide and toxicity results to be used in further analysis.	Erwin Roex	12/24/18	✓	
24	8.A.2. Compilation of existing data and literature	D 2.3: Technical memo describing the principles, methodology and metadata used to construct the final database and displaying some basic visualizations.	Erwin Roex	12/24/18	✓	
25	8.A.3. Analysis Methods Report					

	Task	Deliverable	Assigned To	Due Date	Status	Comments
26	8.A.3. Analysis Methods Report	D 3.1. Updated list of water quality thresholds	Erwin Roex	01/15/19	✓	Per Erwin Roex, expected to deliver by end of February 2019. Update: Update on 3/20: expect by end of March. PI states that team has encountered many problems an inconsistencies in the data that caused delays.
27	8.A.3. Analysis Methods Report	D 3.2 Draft memorandum on analytical methods to be used	Erwin Roex	01/15/19	✓	
28	8.A.3. Analysis Methods Report	D 3.3: Final memorandum on analytical methods to be used	Erwin Roex	02/15/19	✓	
29	8.A.4. Interpretive Report					
30	8.A.4. Interpretive Report	D4.1 First Draft Report	Erwin Roex	01/31/19	🔴	On hold temporarily until they receive "notice to proceed" from us, pending final revision of the methods memo.
31	8.A.4. Interpretive Report	D4.2 Final Draft Report	Erwin Roex	03/31/19	🔴	
32	8.A.4. Interpretive Report	D4.3 Final Report	Erwin Roex	05/31/19	🔴	
33	**9. Nutrients Special Studies**					
34	9.A. Cross-Delta Monitoring Using High-Frequency Tools	Report from USGS on Cross-Delta High Frequency Monitoring Project	Brian Bergamaschi	03/31/19	🔴	The Nutrients Subcommittee decided to postpone the project so all 3 cruises will happen in Water Year 2018, commencing in spring, once flows recede. This delay sets the deadline for the final report as early 2019 as a draft. The final report will include a discussion of how the HF data should be used in the context of other monitoring data. From B. Bergamaschi in June 2019: "We turned up a problem with the software that corrects the nitrate sensor data for the optical interference associated with seawater salinity. We could not qualify the data until we made this correction to our QA standard. We have had a long struggle with the vendor to sort it out, and though it is not yet sorted completely, we have finished qualifying the data for publication and have started to put it into the data publication process. The report will follow closely behind. I am happy to share the data files at any time."
35	9.A. Cross-Delta Monitoring Using High-Frequency Tools	Electronic versions of maps produced by the project	Brian Bergamaschi	03/31/19	🔴	
36	9.A. Cross-Delta Monitoring Using High-Frequency Tools	Data files containing constituent concentration data and location information	Brian Bergamaschi	03/31/19	🔴	
37	9.B. Continued Nutrient Data Analysis and Biennial Reporting	Prepare, coordinate, and provide technical support to up to 4 nutrient subcommittee meetings	Philip Trowbridge	06/30/18	✓	Meetings held on 9/29/17, 12/1/17, 1/18/18, 2/15/18. 4 project proposals for FY18-19 were developed.
38	9.B. Continued Nutrient Data Analysis and Biennial Reporting	Outline for biennial synthesis report to be completed in FY18-19	Philip Trowbridge	06/30/18	✓	Proposal prepared for Nutrient Subcommittee. The Subcommittee set this project as a low priority for further action.
39	9.B. Continued Nutrient Data Analysis and Biennial Reporting	Design additional statistical analyses to be completed in FY17-18	Philip Trowbridge	09/30/17	✓	This task was a placeholder for any follow-on analyses after the three synthesis reports were completed. The subcommittee did not authorize any additional statistical analyses so this task no longer relevant.
40	9.B. Continued Nutrient Data Analysis and Biennial Reporting	Complete additional statistical analyses and prepare technical report	Philip Trowbridge	12/31/17	✓	This task was a placeholder for any follow-on analyses after the three synthesis reports were completed. The subcommittee did not authorize any additional statistical analyses so this task no longer relevant.
41	9.C. Chlorophyll Sensor Intercalibration	Prepare, coordinate, and facilitate Phase 1 Technical Team Meetings	Philip Trowbridge	06/30/18	✓	3 meetings held on 9/28/17 and 12/5/17 and 2/6/18.
42	9.C. Chlorophyll Sensor Intercalibration	Develop Phase 2 Project Plan, including study design, logistics, and institutional coordination	Philip Trowbridge	06/30/18	✓	Proposal for Phase II study prepared and presented to the SC on 5/11/18.
43	**10. Mercury Monitoring**					
44	10.B. Mercury Monitoring	Mercury Data Uploaded to CEDEN	Amy Franz	01/31/19	✓	As of Sept 2018, MOST FY17/18 data has been received from the lab. Data management will not marked as complete until QA is complete and data is uploaded to CEDEN. Update Nov 2018: MLML reports that there were problems with the TOC data (broken/malfunctioning equipment). They sent samples to an external, commercial lab to analyze for TOC. These data are not expected to be reported to her until early December. Matt (ASC project manager) instructed ASC data services team to delay doing the data management and QA of this dataset, so that it can all be done together, rather than processing two separate datasets, which would result in extra time and expense. (TOC is an important ancillary parameter for interpreting the mercury results, and I decided that even though we have 99% of the data, it did not make sense to move forward with an incomplete dataset.) New timeline to complete the QA is about mid-January taking into account planned time off for staff around the holidays. Update July 10, 2019: Data is uploaded but not yet made public pending approval.
45	10.B. Mercury Monitoring	Mercury QA Memo	Don Yee	05/31/19	🔴	As of Jan 2019, QA is complete for the fish tissue data, but we are waiting for the complete results for water and sediment. Update July 10, 2019: Draft QA memo provided to project manager. Editing before distributing to Mercury Subcommittee
46	10.C. Technical Coordination	Draft Mercury Data Report	Jay Davis	05/31/19	🔴	Update July 10, 2019: Draft report will be finalized and distributed to the subcommittee in the next 2-3 weeks.
47	10.C. Technical Coordination	Final Mercury Data Report	Jay Davis	07/31/19	🟡	
48						

	Task	Deliverable	Assigned To	Due Date	Status	Comments
49	**FY18-19 Delta RMP Workplan**					
50	**1. Program management**					
51	A. Program planning	Detailed Workplan and Budget for FY19-20	Matthew Heberger	05/01/19	✓	
52	A. Program planning	Updated Communications Plan (if necessary)	Matthew Heberger	06/30/19	🔴	
53	A. Program planning	Updated Monitoring Design Summary (if necessary)	Matthew Heberger	06/30/19	✓	Provided as attachments to the annual workplan
54	A. Program planning	Amended Charter (if necessary)	Matthew Heberger	12/31/18	✓	Some charter amendments were made at the Oct 29, 2018 SC meeting. Charter was amended and posted on the website.
55	A. Program planning	Quarterly Report #1 on Deliverables and Action Items	Matthew Heberger	09/30/18	✓	
56	A. Program planning	Quarterly Report #2 on Deliverables and Action Items	Matthew Heberger	12/31/18	✓	This will accompany the SC meeting package and finance memo.
57	A. Program planning	Quarterly Report #3 on Deliverables and Action Items	Matthew Heberger	04/30/19	✓	
58	A. Program planning	Quarterly Report #4 on Deliverables and Action Items	Matthew Heberger	07/31/19	🟡	
59	**B. Contract and financial management**					
60	B. Contract and financial management	Quarterly finance update #1	Matthew Heberger	10/08/18	✓	
61	B. Contract and financial management	Quarterly finance update #2	Matthew Heberger	02/01/19	✓	
62	B. Contract and financial management	Quarterly finance update #3	Matthew Heberger	05/01/19	✓	
63	B. Contract and financial management	Quarterly finance update #4	Matthew Heberger	07/30/19	🟡	
64	B. Contract and financial management	Invoices to Delta RMP participants/contributors	Matthew Heberger	06/15/19	✓	In addition, invoices will be sent as needed to any new Delta RMP participants that may join during the year.
65	B. Contract and financial management	New or extended contracts for those Delta RMP participants that require a contract in order to pay ASC	Matthew Heberger	06/30/19	🔴	Participants requiring a contract include Regional San, Caltrans, State Water Contractors (formerly SFCWA). As of July 2019, in progress.
66	B. Contract and financial management	Contracts with subcontractors, labs	Matthew Heberger	06/30/19	✓	After the workplan has been approved by the SC, put in place contracts with any labs, contractors. USGS, MLML, McCord, AMS, and others.
67	**2. Governance**					
68	**A. Steering Committee meetings**					
69	Coordinating Committee Pre-Call #1	Agenda and informal summary	Matthew Heberger	06/15/18	✓	
70	Coordinating Committee Post-Call #1	Agenda and informal summary	Matthew Heberger	07/31/18	✓	
71	Coordinating Committee Pre-Call #2	Agenda and informal summary	Matthew Heberger	10/15/18	✓	
72	Coordinating Committee Post-Call #2	Agenda and informal summary	Matthew Heberger	11/15/18	✓	
73	Coordinating Committee Pre-Call #3	Agenda and informal summary	Matthew Heberger	01/15/19	✓	
74	Coordinating Committee Post-Call #3	Agenda and informal summary	Matthew Heberger	02/28/19	✓	
75	Coordinating Committee Pre-Call #4	Agenda and informal summary	Matthew Heberger	05/15/19	✓	
76	Coordinating Committee Post-Call #4	Agenda and informal summary	Matthew Heberger	06/15/19	✓	
77	SC Meeting #1 (2018-07-17)	Agenda Package	Matthew Heberger	07/07/19	✓	
78	SC Meeting #1 (2018-07-17)	Meeting Summary	Matthew Heberger	09/28/18	✓	
79	SC Meeting #2 (2018-10-29)	Agenda Package	Matthew Heberger	10/14/18	✓	
80	SC Meeting #2 (2018-10-29)	Meeting Summary	Matthew Heberger	12/28/18	✓	
81	SC Meeting #3 (2019-02-22)	Agenda Package	Matthew Heberger	01/15/19	✓	
82	SC Meeting #3 (2019-02-22)	Meeting Summary	Matthew Heberger	03/29/19	✓	
83	SC Meeting #4 (May 2019)	Agenda Package	Matthew Heberger	05/31/19	✓	
84	SC Meeting #4 (May 2019)	Meeting Summary	Matthew Heberger	06/28/19	✓	
85	SC Teleconference (as necessary)	Agenda Package	Matthew Heberger	06/28/19	✓	
86	SC Teleconference (as necessary)	Meeting Summary	Matthew Heberger	06/28/19	✓	
87	**B. Technical Advisory Committee meetings**					
88	TAC Meeting #1 (2018-09-21)	Agenda Package	Matthew Heberger	09/14/18	✓	Meeting held on Sept 21, 2018. Agenda package sent on Sept 17.
89	TAC Meeting #1 (2018-09-21)	Meeting Summary	Matthew Heberger	10/05/18	✓	Draft distributed to TAC via email on Oct 3, 2018.
90	TAC Meeting #2 (2019-01-17)	Agenda Package	Matthew Heberger	12/31/18	✓	Meeting held on Jan 17, 2019. Agenda package sent on Jan 9.
91	TAC Meeting #2 (2019-01-17)	Meeting Summary	Matthew Heberger	01/15/19	✓	Draft distributed to TAC via email on Jan 28, 2019
92	TAC Meeting #3 (Spring 2019)	Agenda Package	Matthew Heberger	02/28/19	✓	

	Task	Deliverable	Assigned To	Due Date	Status	Comments
93	TAC Meeting #3 (Spring 2019)	Meeting Summary	Matthew Heberger	03/15/19	✓	
94	TAC Meeting #4 (Summer 2019)	Agenda Package	Matthew Heberger	06/30/19	✓	
95	TAC Meeting #4 (Summer 2019)	Meeting Summary	Matthew Heberger	07/15/19	●	
96	TAC Teleconference (as necessary)	Agenda Package	Matthew Heberger	06/30/19	✓	An 3-hour teleconferences was held on June 29, 2018 to discuss Monitoring proposals for FY 2018-19, pesticides and CECs.
97	TAC Teleconference (as necessary)	Meeting Summary	Matthew Heberger	06/30/19	✓	
98	**C. Technical Subcommittees**					
99	Pesticides subcommittee meetings					
100	Pesticides Subcommittee Meeting #1	Meeting agenda package; meeting summary	Matthew Heberger	08/01/18	✓	
101	Pesticides Subcommittee Meeting #2	Meeting agenda package; meeting summary	Matthew Heberger	08/28/18	✓	
102	Pesticides Subcommittee Meeting #3	Meeting agenda package; meeting summary	Matthew Heberger	09/13/18	✓	
103	Pesticides Subcommittee Meeting #4	Meeting agenda package; meeting summary	Matthew Heberger	12/31/18	✓	
104	Pesticides Subcommittee Meeting #5	Meeting agenda package; meeting summary	Matthew Heberger	03/31/19	✓	
105	Pesticides Subcommittee Meeting #6	Meeting agenda package; meeting summary	Matthew Heberger	06/30/19	✓	
106	Nutrients subcommittee meetings					
107	Nutrients Subcommittee Meeting #1	Meeting agenda package; meeting summary	Philip Trowbridge	09/30/18	✓	
108	Nutrients Subcommittee Meeting #2	Meeting agenda package; meeting summary	Philip Trowbridge	12/31/18	✓	
109	Nutrients Subcommittee Meeting #3	Meeting agenda package; meeting summary	Philip Trowbridge	03/31/19	✓	
110	Nutrients Subcommittee Meeting #4	Meeting agenda package; meeting summary	Philip Trowbridge	06/30/19	✓	
111	Mercury subcommittee meetings					
112	Mercury Subcommittee Meeting #1	Meeting agenda package; meeting summary	Jay Davis	10/31/18	✓	
113	Mercury Subcommittee Meeting #2	Meeting agenda package; meeting summary	Jay Davis	03/31/19	✓	
114	CEC Subcommittee meetings					
115	CEC Subcommittee Meeting #1	Meeting agenda package; meeting summary	Matthew Heberger	10/31/18	✓	
116	CEC Subcommittee Meeting #2	Meeting agenda package; meeting summary	Matthew Heberger	03/31/19	✓	
117	Toxicity work group meetings					
118	Toxicity Work Group Meeting #1	Meeting agenda package; meeting summary	Matthew Heberger	09/13/18	✓	
119	Toxicity Work Group Meeting #2	Meeting agenda package; meeting summary	Matthew Heberger	06/30/19	✓	Meeting planned for June 24, 2019.
120	**3. Quality Assurance**					
121	A. QAPP Revision	Draft revised QAPP to send to signatories	Don Yee	09/28/18	✓	Revised QAPP required to kick off FY18-19 monitoring, adding new and revised elements for pesticides monitoring.
122	A. QAPP Revision	Spring 2019 QAPP Revisions to signatories	Don Yee	07/15/19	●	Budgeted for a minor revision in the spring of 2019, following the approval of the FY19/20 workplan to account for any updated labs, protocols, etc. Note that the creation of a separate QAPP to cover CEC monitoring is included under a separate budget line and is listed as a standalone deliverable.
123	**4. Nutrients Special Studies**					
124	**4.B. Chlorophyll Sensor Intercalibration Study**					
125	Chlorophyll Sensor Intercalibration Study	Assessment of Chlorophyll Sensor Methods In Use	Matthew Heberger	12/31/18	✓	USGS will lead this task
126	Chlorophyll Sensor Intercalibration Study	Presentation to WG on Field Intercalibration Exercises	Liz Stumpner	12/31/18	✓	Liz gave a presentation about this at the Workgroup meeting on 3/13/2019.
127	Chlorophyll Sensor Intercalibration Study	Report on Laboratory Intercalibration Study	Matthew Heberger	05/31/19	●	The lab intercalibration was delayed until the spring to give us more time to organize the logistics and to recruit labs to participate. First round of samples will be taken the week of 4/22.
128	Chlorophyll Sensor Intercalibration Study	Summary Report with Recommendations for Next Steps	Matthew Heberger	06/30/19	●	
129	Chlorophyll Sensor Intercalibration Study	Workgroup Meeting #1, Agenda and Summary	Matthew Heberger	09/30/18	✓	WG Meeting #1 held Sept 28, 2018
130	Chlorophyll Sensor Intercalibration Study	Workgroup Meeting #2, Agenda and Summary	Matthew Heberger	12/31/18	✓	WG Meeting #2 held Dec 5, 2018
131	Chlorophyll Sensor Intercalibration Study	Workgroup Meeting #3, Agenda and Summary	Matthew Heberger	03/31/19	✓	Meeting planned for March 2019
132	Chlorophyll Sensor Intercalibration Study	Workgroup Meeting #4, Agenda and Summary	Matthew Heberger	06/30/19	●	
133	**4.A. WY2016 Modeling and Monitoring Synthesis**					
134	WY2016 Modeling and Monitoring Synthesis	Progress Report to Nutrient Subcommittee or Delta-Suisun Modeling Team	Matthew Heberger	07/31/18	✓	Provided progress report to RB5 to give to the STAG. Gave a presentation to the STAG on 9/18/18.

	Task	Deliverable	Assigned To	Due Date	Status	Comments
135	WY2016 Modeling and Monitoring Synthesis	Progress Report to Nutrient Subcommittee or Delta-Suisun Modeling Team	Matthew Heberger	01/31/19	✓	This update should be given at the Delta-Suisun Team Meeting
136	WY2016 Modeling and Monitoring Synthesis	Progress Report to Nutrient Subcommittee or Delta-Suisun Modeling Team	Matthew Heberger	07/31/19	🟡	This update should be given at the Delta-Suisun Team Meeting
137	WY2016 Modeling and Monitoring Synthesis	Progress Report to Nutrient Subcommittee or Delta-Suisun Modeling Team	Matthew Heberger	01/31/20	🟢	This update should be given at the Delta-Suisun Team Meeting
138	WY2016 Modeling and Monitoring Synthesis	Create WY2016 Hydrodynamics Model Output	Matthew Heberger	06/30/19	🔴	WY2016 hydrodynamics will be developed in DFM by SFEI staff. The STAG/Nutrients Subcmte was briefed of this change on 9/18/18 and agreed. Allie King, PhD, a new SFEI staff scientist, began working on this in Nov 2018.
139	WY2016 Modeling and Monitoring Synthesis	Adapt and validate CASCaDE Delft3D-FM model for WY2016	Matthew Heberger	12/31/19	🟢	Task was originally "Develop Converter Code." Code will be developed during 2019. Code could not be developed in 2018 without delaying the project. The STAG/Nutrients Subcommittee was briefed of this change on 9/18/18 and agreed. Ultimately, the project team decided that it was not practical to convert the output from DWR's SCHISM into the format needed for our biogeochemical model DelWAQ. Rather, we decided it made sense to adapt and calibrate the CASCaDE Delft3D-FM model for WY2016. The USGS already developed, calibrated and validated for WY2011-WY2012.
140	WY2016 Modeling and Monitoring Synthesis	Draft Report for Delta RMP Committee Review	Matthew Heberger	03/31/20	🟢	
141	WY2016 Modeling and Monitoring Synthesis	Final Report	Matthew Heberger	06/30/20	🟢	
142	**5. Mercury Monitoring FY18-19**					
143	5.A. Mercury Data collection and analysis	Year 3 Mercury Data Report	Jay Davis	12/31/19	🟢	
144	5.B. Mercury Data Management and Quality Assurance	Mercury Fish and Water QA Summary Technical Memo	Don Yee	10/31/19	🟢	
145	5.B. Mercury Data Management and Quality Assurance	Formatted and QA'ed Mercury Data uploaded to CEDEN	Amy Franz	10/31/19	🟢	
146	**6. Pesticide Monitoring Water Year 2019**					
147	6.A. Field sample collection and laboratory analysis	Amendments to QAPP describing sampling and analysis for pesticides chemistry and aquatic toxicity	Don Yee	09/30/18	✓	
148	6.A. Field sample collection and laboratory analysis	Pesticides chemistry provisional data shared with TAC, Event #1	Matthew Heberger	12/31/18	✓	Updated 2/13/19: ASC has received from OCRL: (2) scanned field data sheets, and (3) Chain of Custody forms. Still expecting (1) Provisional results in a spreadsheet. Analysis of the samples was delayed because of the federal government shutdown.
149	6.A. Field sample collection and laboratory analysis	Pesticides chemistry provisional data shared with TAC, Event #2	Jim Orlando	02/28/19	✓	(1) Provisional results in a spreadsheet, (2) scanned field data sheets, and (3) Chain of Custody forms.
150	6.A. Field sample collection and laboratory analysis	Pesticides chemistry provisional data shared with TAC, Event #3	Jim Orlando	05/31/19	✓	Monitoring conducted April 29-30, 2019. USGS OCRL staff plan to distribute chemistry results as soon as they are available, around mid-May
151	6.A. Field sample collection and laboratory analysis	Pesticides chemistry provisional data shared with TAC, Event #4	Jim Orlando	05/31/19	🔴	(1) Provisional results in a spreadsheet, (2) scanned field data sheets, and (3) Chain of Custody forms.
152	6.A. Field sample collection and laboratory analysis	Pesticides chemistry provisional data shared with TAC, Event #5	Jim Orlando	06/30/19	🔴	(1) Provisional results in a spreadsheet, (2) scanned field data sheets, and (3) Chain of Custody forms.
153	6.A. Field sample collection and laboratory analysis	Pesticides chemistry provisional data shared with TAC, Event #6	Jim Orlando	07/31/19	🟡	(1) Provisional results in a spreadsheet, (2) scanned field data sheets, and (3) Chain of Custody forms.
154	6.A. Field sample collection and laboratory analysis	Pesticides Chemistry Lab Report	Jim Orlando	12/31/19	🟢	Report to the Delta RMP; not a formal USGS Data Series Report.
155	6.B. Toxicity reporting	Aquatic toxicity provisional data shared with TAC, Sampling Event #1	Marie Stillway	12/31/18	✓	ASC has contracted with AHPL to produce this reporting, as it is NOT covered under the contract with SWAMP. In lieu of a formal report, the lab manager will provide provisional data and information on the labs internal processes and controls, including: A) SWAMP Toxicity Transformers (no charge); B) Bench Sheet Copies; C) Reference Toxicant Control Charts; D) Corrective Actions Table.
156	6.B. Toxicity reporting	Aquatic toxicity provisional data shared with TAC,, Sampling Event #2	Marie Stillway	02/28/19	✓	
157	6.B. Toxicity reporting	Aquatic toxicity provisional data shared with TAC,, Sampling Event #3	Marie Stillway	06/15/19	🔴	Sampling event conducted April 29-30, 2019. Typically takes 4-6 weeks to obtain results.
158	6.B. Toxicity reporting	Aquatic toxicity provisional data shared with TAC,, Sampling Event #4	Marie Stillway	05/31/19	🔴	
159	6.B. Toxicity reporting	Aquatic toxicity provisional data shared with TAC,, Sampling Event #5	Marie Stillway	06/30/19	🔴	
160	6.B. Toxicity reporting	Aquatic toxicity provisional data shared with TAC,, Sampling Event #6	Marie Stillway	07/31/19	🟡	
161	6.C. Pesticides Data Management and Quality Assurance	Pesticides chemistry QA Summary and Technical Memo	Don Yee	12/31/19	🟢	
162	6.C. Pesticides Data Management and Quality Assurance	Formatted pesticides data uploaded to CEDEN	Amy Franz	12/31/19	🟢	
163	**7. CEC Monitoring Plan for FY19-20**					

	Task	Deliverable	Assigned To	Due Date	Status	Comments
164	7.A. CEC Monitoring Coordination and planning	Draft CEC Sampling and Analysis Plan	Matthew Heberger	03/04/19	✓	Incorporated into the QAPP per State Board request.
165	7.A. CEC Monitoring Coordination and planning	Final CEC Sampling and Analysis Plan	Matthew Heberger	05/31/19		
166	7.B. QAPP Amendments to cover CEC Monitoring	Draft QAPP for CEC monitoring	Matthew Heberger	03/25/19	✓	70% draft shared with TAC in April 2019
167	7.B. QAPP Amendments to cover CEC Monitoring	Final QAPP for CEC monitoring	Matthew Heberger	05/31/19		

Delta RMP Action Items

Key to Status Colors:
Checkmark indicates done.
Green indicates greater than 90 days until the deliverable is due.
Yellow indicates a deliverable is due within 90 days.
Red indicates a deliverable that is overdue.

	Task	Date Created	Due Date	Assigned To	Status	Comments
1	**Steering Committee (SC) Action Items**					
45						
46						
47	**Technical Advisory Committee (TAC) Action Items**					
48	**TAC Action Items 2018-06-12**	**06/12/18**				
49	Set a meeting of the Pesticides Subcommittee Meeting, Friday, November 9, 2018, 3-4 hours, to meet with the team from Deltares	06/12/18	06/30/18	Matthew Heberger	✓	
50	Set a "supplemental" meeting of the TAC for June 29, phone and online only. Purpose is to review and make a recommendation on the pesticides monitoring proposals.	06/12/18	06/15/18	Matthew Heberger	✓	
51	Draft a scope of work for toxicity reporting that describes a smaller effort to bring the total estimated costs closer to the 250k proposed budget.	06/12/18	06/15/18	Matthew Heberger	✓	ASC staff worked with AHPL lab manager to develop a quote for supplemental information provided to us at a cost of $15K, rather than the $50K report.
52	Revise the ranking questionnaire (for the pesticides monitoring design) with suggested edits and distribute to the TAC. The TAC will then have a week to complete the rankings.	06/12/18	06/30/18	Matthew Heberger	✓	
53	Follow up with swamp on flagging of Chironomus toxicity data, specifically what is the meaning and implication of being flagged as "survey data."	06/12/18	06/30/18	Beverly Anderson-Abbs	✓	
54	Clarify what action/feedback is being requested from the steering committee at July 17, 2018 meeting on the CEC monitoring proposal.	06/12/18	06/30/18	Brian Laurenson	✓	
55	Include an agenda item in the July 17, 2018 steering committee meeting agenda to evaluate compensation for the TAC chair	06/12/18	06/30/18	Matthew Heberger	✓	Following discussion with the Coordinating Committee, it was agreed to handle this as part of the FY19/20 budgeting process.
56	For the memo "Plan for Science Advisor Input in FY18/19," add the names of the list of science advisors with the overall calendar of milestones/due dates. Add the following phrase at the end of the second sentence in the science advisor job description: "…to better support the goals of the Delta RMP."	06/12/18	08/31/18	Matthew Heberger	✓	
57	**TAC Action Items 2018-06-29**	**06/29/18**				
58	Find out how Chironomus toxicity data will be flagged in CEDEN and what implications that has for use by regulators	06/29/18	07/12/18	Beverly Anderson-Abbs	✓	
59	Schedule meetings of the Pesticides Subcommittees and Toxicity Workgroup for July and August	06/29/18	07/12/18	Matthew Heberger	✓	
60	Send a track changes version to TAC members to show exactly what changed	06/29/18	07/01/18	Matthew Heberger	✓	
61	TAC members with any additional comments, especially any dissenting opinions should send any additional comments or feedback	06/29/18	07/01/18	TAC members	✓	
62	Stephen McCord to send his "talking points" about the proposal to TAC members for review	06/29/18	07/10/18	Stephen McCord	✓	
63	Distribute slide presentation about the pesticides monitoring proposal to TAC members	06/29/18	07/12/18	Matthew Heberger	✓	
64	**TAC Action Items 2018-09-21**	**09/21/18**				
65	Schedule doodle poll for next pesticides subcommittee meeting	09/21/18	10/07/18	Matthew Heberger	✓	
66	Revise the June 29 tac summary; in the paragraph beginning "one tac member noted…" to replace the "would not" with "may not be useful."	09/21/18	09/30/18	Matthew Heberger	✓	
67	Revise pathogens monitoring final report with committee comments. Committee members to submit final comments no later than Tuesday, 9/25.	09/21/18	10/15/18	Brian Lauerson	✓	
68	Request TAC approval of the FY16/17 Pesticides data at the joint meeting agenda, prior to an SC vote on whether to approve and publish. (TAC members wanted more time to review the data.)	09/21/18	10/15/18	Matthew Heberger	✓	
69	Jim Orlando requested Matt send him a copy of the appendix to the QAPP.	09/21/18	10/15/18	Matthew Heberger	✓	
70	Invite one or more science advisors to the November 9, 2018 pesticides subcommittee (with Deltares). Also, schedule a one hour meeting with the science advisors (without Delatares) after the subcommittee meeting.	09/21/18	10/15/18	Matthew Heberger	✓	This meeting has been postponed until Dec 10 and changed to a teleconference. Invited our two pesticides advisors, Drs. Nowell and Cherr.

	Task	Date Created	Due Date	Assigned To	Status	Comments
71	Include a specific science advisor engagement plan in next year's work plan.	09/21/18	05/15/19	Matthew Heberger	✓	
72	Work with Cam Irvine to revise tox testing information in presentation.	09/21/18	10/15/18	Matthew Heberger	✓	Recorded by Daphne. Emailed Cam to disambiguate. Neither of us could understand what it meant.
73	Matt will develop a timeline for completion of the QAPP and distribution to the TAC for review and approval. This will be added to the agenda of the next pesticides subcommittee (date TBD).	09/21/18	10/05/18	Matthew Heberger	✓	
74	Matt will begin the process of securing funding and assistance for writing a CEC-related prop 1 proposal. CEC subcommittee could also assist ASC in writing and review of the proposal.	09/21/18	10/05/18	Matthew Heberger	✓	
75	Matt will look into securing a guest speaker for October 29th joint meeting.	09/21/18	10/15/18	Matthew Heberger	✓	
76	Incorporate the following suggested items from the committee into the joint meeting agenda (see meeting summary for list)	09/21/18	10/15/18	Matthew Heberger	✓	
77	Ask Dave Mount from EPA his expert opinion on the use of an alternative mid-range conductivity control for toxicity testing with Ceridaphnia dubia	09/21/18	10/03/18	Matthew Heberger	✓	Received an email from Debra Denton with Dr. Mount's comments on Oct 3.
78	Propose that OIMA revise the memo on the use of low-conductivity controls for toxicity testing with Ceriodaphnia dubia.	09/21/18	10/03/18	Matthew Heberger	✓	Informed by Melissa Morris via email on Oct 2 that they are considering revising their guidance documents, but the timeline is uncertain.
79	**TAC Action Items 2019-01-07**	**01/07/19**				
80	Update project management plan (Gantt chart) with correct dates for the Pulse publication timeline (Fall 2020)	01/17/19	01/25/19	Matthew Heberger	✓	
81	Contact Janis Cooke regarding bivalve sampling program she is managing and potential for coordinating/cost-sharing	01/17/19	01/25/19	Matthew Heberger	✓	Matt spoke to Janis on Jan 25. She is contracting with the Fisheries Foundation, a nonprofit fish biology firm in Elk Grove. Only one of their planned monthly sampling sites is in the same location as the planned Delta RMP sampling sites, however other sites on the Sacramento River are somewhat close to ours. They field crew is planning on 3 days to monitor all 10 of their sites. We had presumed it would take 2 days to monitor our 5 sites for bivalves and sediment. So it appears economies of scale are likely to be minor. However, we will consider obtaining a bid from this firm.
82	Update monitoring event summary worksheet to correct typo (Mercury sampling planned in 2019).	01/17/19	01/25/19	Matthew Heberger	✓	
83	Add an errata sheet to the toxicity lab reports, to indicate to readers that the C. dubia data has been modified after the report was written, and that data users should obtain updated data from CEDEN, and be aware that tables and summaries may be inaccurate.	01/17/19	01/31/19	Matthew Heberger	✓	This report was updated and the new file was published online. https://www.sfei.org/documents/delta-pesticides-2016 An email was sent to the TAC on 2019-03-24.
84	Update and reconfirm members of our TIE Committee	01/17/19	01/31/19	Matthew Heberger	✓	
85	Add Ted Swift (DWR) to the chlorophyll intercalibration workgroup	01/17/19	01/31/19	Matthew Heberger	✓	
86	Add "science strategies" to our table of management drivers	01/17/19	01/31/19	Matthew Heberger	✓	
87	Distribute announcement on pesticides symposium to TAC members	01/17/19	01/31/19	Matthew Heberger	✓	
88	This spring, review the management and assessment questions for each focus area with the relevant technical subcommittee.	01/17/19	01/31/19	Matthew Heberger	✓	Pesticides Subcommittee on Feb 26, 2019 recommended adding a question related to drinking water impacts. To discuss at a future TAC/SC meeting. Background material is a white paper by Kelly Moran and distributed to the subcommittee by Armand Ruby. Further, now that the Delta RMP is planning monitoring for CECs, it is appropriate to put in place "Management and Assessment Questions" for this focus area. ASC scientists are creating a "strawman" first draft to be discussed by the TAC and SC.
89	Schedule a pesticides subcommittee meeting for this spring in order to review the wet weather/high flow monitoring triggers and potentially lower them.	01/17/19	01/31/19	Matthew Heberger	✓	
90	**TAC Action Items 2019-05-09**	**05/09/19**				
91	Confirm meeting room locations for the July and September meetings and forward date, time & location information to the committee	05/09/19	05/31/19	Matthew Heberger	✓	
92	Update the TAC Meeting Summary to reflect an Errata sheet was also added to the FY 16/17 Toxicity Report	05/09/19	05/31/19	Matthew Heberger	✓	
93	Put on the agenda for a meeting of the Toxicity Workgroup: How to deal with persistent algal toxicity that we are seeing in this monitoring season.	05/09/19	06/15/19	Liz Miller, Matthew Heberger	✓	
94	Send TAC members the funding level guidance given by the SC at last fall's joint meeting.	05/09/19	05/10/19	Matthew Heberger	✓	
95	Add the standard or threshold of 0.24 ppm to the mercury time series plots in the proposal and report.	05/09/19	05/19/19	Jay Davis	✓	
96	As we finalize the choice of mercury monitoring locations, speak with restoration managers, to find out more about the construction, phasing, and hydrology of individual projects.	05/09/19	09/30/19	April Robinson, Jay Davis	✓	
97	Consult the mercury subcommittee and the TAC on the final choice of sampling sites, species monitored, and sampling timeframe.	05/09/19	09/30/19	Jay Davis	✓	
98	Consider adding an increased funding option for the pesticides monitoring project that will accelerate the schedule and complete the study more quickly.	05/09/19	05/18/19	Matthew Heberger	✓	This suggestion came about after Matt mentioned that the CEC study budget would be lower than the target of $250K, due to the large amount of in-kind contributions from project partners for field sampling in particular. The thinking was that this may free up extra money for other focus areas, e.g. pesticides. However, in assembling the overall program budget, there was nothing left over. A key reason for this is that the SWAMP contract which has funded our aquatic toxicity testing for the last several years is going to expire in March 2020, meaning that the program will have to pay for tox. testing on its own in the second half of Water Year 2020, to the tune of $169,000 (!).
99	Send the CEC budget to the TAC as well as the SC once it is finalized.	05/09/19	05/31/19	Matthew Heberger	✓	
100	Consult the Toxicity Workgroup and/or Pesticides Subcommittee to assist in planning any toxicity intercomparison we may do.	05/09/19	08/15/19	Liz Miller, Matthew Heberger	✓	Discussed at meeting on 2019-07-16. Workgroup gave guidance, asked staff to prepare strawman proposal for next meeting, to be scheduled.
101	Incorporate a version of the proposed study planning timeline in the materials for the multi-year planning workshop	05/09/19	08/15/19	Matthew Heberger, Selina Cole	✓	Planning committee agreed this was more appropriate for a future SC meeting with a focus on reforming governance.

	Task	Date Created	Due Date	Assigned To	Status	Comments
102	Suggest to Deltares to add a meeting to discuss the methods memo before we give them a notice to proceed with the analysis.	05/09/19	05/12/19	Matthew Heberger	✓	
103	Ask Deltares to submit a track changes version of the tech memo to see exactly what has changed and how they responded to comments/suggestions rather than asking them to provide a formal response to comments.	05/09/19	05/12/19	Matthew Heberger	✓	
104	Send instructions to TAC members that you can leave a question blank if you feel that it does not apply or is not relevant.	05/09/19	05/12/19	Matthew Heberger	✓	
105	Add DPR and DTSC programs to Management Drivers Table, and incorporate a cross reference to Delta RMP Management Assessment Questions if possible	05/09/19	05/15/19	Stephen McCord	✓	
106	**TAC Action Items 2019-07-19**	**07/19/19**				
107	Schedule a meeting of the Data Management Subcommittee to discuss the proposed corrective actions/QAPP deviations form.	07/19/19	07/31/19	Selina Cole	🟡	
108	Consider compiling the pesticides and toxicity data into a single workbook where they can be compared	07/19/19	07/31/19	Matthew Heberger	🟡	Another option would be to put this into the dataviz, but would require some budget.
109	Consider doing some analysis on pesticides uses and loads	07/19/19	07/31/19	Matthew Heberger	✓	ASC does not really have a budget for analysis. The SC explicitly instructed us to outsource the interpretive report to a consultant in July 2017. Nevertheless, ASC scientists have done some of these analyses in the course of program planning, preparing proposals, etc. For example, we worked with DPR to run the Pesticide Prioritization Model in July 2019. This shows which compounds are being applied in the watershed, and ranks them based on their toxicity. In April 2018, a pesticides subcommittee member requested some maps of crops and pesticide application in Delta subareas, as part of pesticide planning effort. For the meeting on April 12, 2018, SFEI scientists presented maps and tables showing crops grown and pesticides applied in and around the Delta. I will reshare these with the TAC and ask if there is anything else that folks think is useful. We may be able to put together a proposal for some additional desktop analyses.
110	Request all TAC members to read the summary of the July 15 meeting with Deltares, and make sure that it accurately captured any remaining concerns about their proposed methods.	07/19/19	07/26/19	Matthew Heberger	✓	Email sent on 7/22
111	Inquire with Deltares PI about comments that they did not address.	07/19/19		Matthew Heberger, Michael Johnson		
112	Pesticide Subcommittee to review wording of proposed assessment question related to pesticides and human health	07/19/19	09/30/19	Pesticides Subcommittee	🟡	
113	Look into an unbiased dot voting app or website for the Long-Range Planning Meeting	07/19/19	07/28/19	Matthew Heberger	🟡	
114	Organize a 1-hour teleconference for the TAC after we get the revised, final Deltares methods memo	07/19/19	08/15/19	Matthew Heberger	🟡	
115	Reconcile completion of the CEC QAPP with the sampling timeline planned to begin in August.	07/19/19	07/25/19	Matthew Heberger	🔴	Working with Moss Landing to figure out possible sampling dates and to determine with sampling needs to be delayed.
116	Map out timeline/process for selection of a new tox lab to avoid any gap in monitoring schedule	07/19/19	08/15/19	Matthew Heberger	🟡	
117						
118	**Coordinating Committee Action Items**					
119	**Coordinating Committee Meeting 2018-06-07**					
120	Debbie agreed to talk to her technical advisors about the issues with the toxicity lab to ensure that we are adequately dealing with concerns about past data and are able to move forward with seeking approval of a plan for the upcoming year.	06/07/18	06/28/18	Debbie Webster	✓	
121	Send pesticides monitoring proposals to our expert advisors	06/07/18	06/28/18	Matthew Heberger	✓	
122	Confirm whether Melissa Turner is still willing and able to give a presentation about ILRP monitoring	06/07/18	06/28/18	Matthew Heberger	✓	
123	Add information on population to Matt's spreadsheet of Delta RMP contributors and their amounts.	06/07/18	06/28/18	Selina Cole	✓	
124	Consider organizing special meeting of SC delegates to discuss pesticides proposals between June 25 and July 3	06/07/18	06/28/18	Debbie Webster	✓	
125	Call the Army Corps today and remind them that they need to make their $50K contribution promptly. They are under an MOU to pay within 15 days.	06/07/18	06/07/18	Matthew Heberger	✓	
126	**Coordinating Committee Meeting 2018-10-06**					
127	Propose a deadline on our Data Management and Quality Assurance SOP, check with Melissa Morris that it's acceptable.	10/06/18	10/15/18	Matthew Heberger	✓	Ms. Morris confirmed that "Yes, if the updates meet the requirements of a QAPP for the new sections, we can keep the conditional approval going as long as needed to complete the SOP. "
128	Provide an update on the Data Management and Quality Assurance SOP document to the Steering Committee.	10/06/18	10/29/18	Matthew Heberger	✓	Update scheduled for Joint Meeting on 10/29.
129	Patrick to write a 1-2 page memo explaining why DWR is in the program; their participation is required in 3 different permits covering barriers, eco-restore, etc. Include in this memo the current participant categories, e.g. stormwater, wastewater, regulatory-state, etc.	10/06/18	10/15/18	Patrick Morris	✓	
130	Send a note to the Steering Committee: Ask members whether they have any changes to the Charter?	10/06/18	10/08/18	Matthew Heberger	✓	
131	Consider a change to the Charter so that the TAC does not require co-chairs.	10/06/18	10/15/18	Matthew Heberger	✓	Agendized for 10/29 meeting.
132	Consider allowing alternates for the Steering Committee chairs.	10/06/18	10/15/18	Matthew Heberger	✓	Agendized for 10/29 meeting.
133	Invite Mike Wackman and Stephen McCord to future Coordinating Committee Meetings.	10/06/18	10/29/18	Matthew Heberger	✓	

	Task	Date Created	Due Date	Assigned To	Status	Comments
134	Send calendar invitations for planned meetings	10/06/18	10/15/18	Matthew Heberger	✓	
135	**Coordinating Committee Meeting 2019-02-05**					
136	Matt to invite Brian Bergamaschi, USGS, to give a presentation about the high-frequency monitoring. If Brian or his colleagues are not available, invite an SFEI ecologist to talk about "A Delta Transformed" or "A Delta Renewed" reports. If no speaker is available on relatively short notice, just end the meeting early.	02/05/19	02/10/19	Matthew Heberger	✓	
137	**Coordinating Committee Meeting 2019-03-05**					
138	Matt to speak with Melissa Morris at State Board/OIMA to find out if there are any remaining concerns with toxicity testing procedures.	03/06/19	03/15/19	Matthew Heberger	✓	
139	After this, Matt to communicate with the SC what procedures the data management and QA team at SWAMP have agreed to follow.	03/06/19	03/31/19	Matthew Heberger	✓	Matt H. gave an update to the SC on this item at the 2019-04-23 Teleconference meeting.
140	Verify that SWAMP has a process in place for correcting errors we may find in the data after it is uploaded.	03/06/19	03/31/19	Matthew Heberger	✓	
141	**Coordinating Committee Meeting 2019-05-08**					
142	Selina to send Matt the list of "study questions" from the state CEC guidance, as a starting point for developing management and assessment questions for RMP monitoring	05/08/19	05/25/19	Selina Cole	●	
143	Patrick Morris to talk with Adam and Danny McClure about whether and how the Delta RMP could support the Pyrethroids TMDL.	05/08/19	05/25/19	Adam Laputz, Danny McClure	✓	Scheduled a discussion of this item for the Aug 5, 2019 SC meeting.
144						
145	**Pesticides Subcommittee Action Items**					
146	**Pesticides Subcommittee Meeting 2018-08-01**	**08/01/18**				
147	Share Deltares contract with the Pesticides Subcommittee (so they can see timeline and deliverables)	08/01/18	08/03/18	Matthew Heberger	✓	
148	Consider putting a discussion of human health impacts of contaminants on the agenda for the Fall Joint Meeting	08/01/18	10/01/18	Matthew Heberger	✓	This recommendation came out of a discussion at the Pesticides Subcommittee where we were reacting to a newspaper article on the use of glyphosate in the Delta. The TAC was decidedly less enthusiastic about this idea when we discussed it on 9/21.
149	Plan a presentation about GRTS for the next meeting of the Pesticides Subcommittee on 8/28.	08/01/18	08/22/18	Aroon Melwani	✓	
150	Research the issue of GRTS sample draw along polylines vs. in polygons, perform a brief literature review, speak to experts and advisors, and come back to the group with options at our next meeting	08/01/18	08/15/18	Matthew Heberger	✓	
151	Share DPR's criteria for storm sampling with the group.	08/01/18	08/15/18	Cam Irvine	✓	
152	Add Alisha Wenzel to the list of people to be informed regarding TIEs.	08/01/18	08/15/18	Patrick Morris	✓	
153	A subset of subcommittee members agreed to help draft relevant sections of the QAPP related to toxicity	08/01/18	08/21/18	Cam Irvine	✓	
154	**Pesticides Subcommittee Meeting 2018-08-28**	**08/28/18**				
155	Create a series of maps for the subcommittee, showing channels classified by depth,e.g. 2m, 3m, 4m	08/28/18	09/05/18	Matthew Heberger	✓	
156	Create 2-3 different "GRTS draws" demonstrating the effect of unequal probabilities	08/28/18	09/05/18	Aroon Melwani	✓	
157	Run queries against the DPR PUR database on common almond pesticides, to determine when they are applied in the Delta	08/28/18	09/08/18	Scott Wagner	✓	
158	Ask SFEI QA officer about whether he would support forgoing field dupes for toxicity testing	08/28/18	09/08/18	Matthew Heberger	✓	
159	Clarify whether SWAMP will pay for field duplicates for water toxicity tests through its contract with AHPL, or whether funding for field dupes would have to come out of Delta RMP funds.	08/28/18	09/08/18	Matthew Heberger	✓	Rate of field duplicates of 5%. Only results in 3 additional env. samples per year, not a large additional expense.
160	**Pesticides Subcommittee Meeting 2018-09-13**	**09/13/18**				
161	Revise the analyte list in the Quality Assurance Program Plan (QAPP) based on new information from Jim Orlando	09/13/18	09/25/18	Matthew Heberger	✓	
162	send committee members Google Earth (KML) files of the sample frame (waterways classified as deep/shallow), and the points generated by GRTS, so that each member can review in "high def" by zooming in.	09/13/18	09/18/18	Matthew Heberger	✓	
163	Include a brief writeup in our sampling plan explaining why we chose the 2.5 m depth cutoff (balance between deep/shallow, ecological significance, looked right based on members knowledge of the Delta).	09/13/18	09/28/18	Matthew Heberger	✓	
164	**Pesticides Subcommittee Meeting 2018-09-25**	**09/25/18**				
165	Regarding Deltares' literature search and "gray literature," be sure that it includes recent monitoring overviews, especially those by Delta RMP members Joe Domagalski and Debra Denton.	09/25/18	11/09/18	Erwin Roex	✓	Sent these documents to Erwin Roex, PI.
166	Look into adding data from California Integrated Water Quality System (CIWQS, commonly pronounced "sea-wicks"), especially any ambient or receiving water samples. (This came with a reminder that we are analyzing water quality conditions in the Delta, not estimating loadings or investigating pollutant sources).	09/25/18	11/09/18	Erwin Roex	✓	Erwin Roex has corresponded about this with Debra Denton and Joe Domagalski.
167	Include the "Legal Delta" boundary on future maps. Matt to send the "legal Delta boundary" shape file to Erwin.	09/25/18	09/30/18	Matthew Heberger	✓	

	Task	Date Created	Due Date	Assigned To	Status	Comments
168	Erwin to contact Xuyang Zhang at DPR to resolve discrepancies in the SURF database. The SURF database may include information that are not included elsewhere and should be included. Xuyang will help resolve questions, e.g. clarify what fraction the results represent (suspended sediment, dissolved, or total)/	09/25/18	10/15/18	Erwin Roex	✓	
169	Matt to look into the data that was recently added to the Regional Data Center (and CEDEN) by SFEI, check whether there is data that should be included for this study, and verify that it is included in the Deltares database.	09/25/18	09/30/18	Matthew Heberger	✓	Here is an article about the project where SFEI digitized and uploaded dozens of "legacy" datasets to the Regional Data Center and CEDEN. Since these data are all in CEDEN, they were included in the download by Deltares scientists. https://www.sfei.org/news/completed-deduce-delta-environmental-data-understanding-california-estuary#sthash.CHfgJwe8.dpbs
170	Xuyang Zhang agreed to provide to Deltares a list of pesticides registered for use in California from 2011 to present.	09/25/18	10/07/18	Xuyang Zhang	✓	Emailed on Oct 5.
171	Deltares hand selected compounds to remove from their database to exclude non-pesticides (pharmaceuticals, industrial chemicals) based on their expert judgment. Erwin agreed to share list of excluded parameters to confirm none are pesticides.	09/25/18	10/15/18	Erwin Roex	✓	
172	Danny McClure agreed to send (via Matt at ASC) additional information about pyrethroids bioavailability.	09/25/18	10/07/18	Danny McClure	✓	
173	Confirm that USGS data includes analyses from all 3 labs that have participated in Delta studies: KS, CO, CA.	09/25/18	10/15/18	Erwin Roex	✓	Shortly after the meeting, Joe Domagalski confirmed that all 3 were included.
174	Joe Domagalski to provide a cross-walk table that relates USGS "parameter codes" to CAS Registry Numbers.	09/25/18	10/07/18	Joe Domagalski	✓	
175	Where the pesticide data from CEDEN had FRACTION = "not recorded," it may be possible to determine this information based on the project. Danny McClure agreed to help research this.	09/25/18	10/15/18	Danny McClure	✓	
176	Deltares team to confirm that they are dealing with QA samples appropriately. Some of the data in CEDEN represent samples that were collected for QA purposes, such as field blanks, field duplicates, matrix spikes, etc.	09/25/18	11/09/18	Erwin Roex	✓	Include description in next deliverable.
177	In some occasions, toxicity identification evaluations (TIEs) were performed as a followup to positive toxicity tests. These data are not readily available via the public interface to CEDEN. Melissa Turner volunteered to help provide these data to Deltares.	09/25/18	10/15/18	Melissa Turner	✓	Email reminder sent in Oct 10, 2018
178	Some of the values in the "Result" field were negative. Deltares assumed these were errors and deleted them. However, they may be meaningful. Consider investigating these to verify these do not contain some "coded" information. Matt to check with ASC's data management team.	09/25/18	10/10/18	Matthew Heberger	✓	According to the CEDEN "Chemistry Data Submission Guidance Document," the Result field may be blank. It says nothing about inserting negative values. Project scientists should look at the corresponding values in the field ResQualCode. For information on possible values and their meaning, see: http://ceden.org/CEDEN_Checker/Checker/DisplayCEDENLookUp.php?List=ResQualLookUp
179	Distribute to members a "primer" or useful background materials on the use of species sensitivity distributions (SSD) and the multi-species potentially affected fraction (msPAF).	09/25/18	10/10/18	Matthew Heberger	✓	Compiled a few references via internet search. Emailed research team to ask for other suggestions. Seems best reference is a highly-cited textbook from 2001 by Posthuma et al. Sent to Technical Advisory Committee and Pesticides Subcommittee with a suggestion to begin with Chapters 1 and 16.
180	Deltares should consider performing simple analyses that will provide useful information to the Delta RMP and to regulators and paint a more complete picture than would be obtained with only a single method. For example, a simple summary of exceedances of EPA's Aquatic Life Benchmarks. Matt to provide a link or table to Deltares.	09/25/18	09/30/18	Matthew Heberger	✓	I confirmed that this is in fact required in their contract. It states that, at a minimum, the investigators shall compare observed pesticide concentrations to appropriate benchmarks.
181	Have the Delta RMP science advisors review the proposed methods for the study; invite them to our forthcoming meeting of the Delta RMP.	09/25/18	10/15/18	Matthew Heberger	✓	Update Oct 16: Erwin has requested postponing this meeting, since they have had trouble compiling the "definitive" database. (Changes keep being made to the toxicity data.)
182	The researchers should filter out sampling locations that represent ditches, farm ponds, etc. that are not connected to Delta waterways. The focus should be on Delta surface waters (not groundwater, and not other types of water, such as irrigation water). Matt can share GIS data of surface water features with Deltares that should be helpful for screening).	09/25/18	09/30/18	Matthew Heberger	✓	Emailed the research team information and links to CARI and NHD, two GIS datasets of surface water features.
183	Consider rescheduling the Nov 9 Pesticides Subcommittee meeting to a later date, possibly hold a teleconference that day and meet again with Deltares in person at a later date.	09/25/18	10/25/18	Matthew Heberger	✓	Rescheduled at the request of Erwin Roex. The toxicity data is still not finalized, so they cannot finalize their database and begin their analyses.
184	**Pesticides Subcommittee Meeting 2019-02-26**	**02/26/19**				
185	Schedule a meeting of the toxicity workgroup to meet to discuss the results of recent toxicity testing, in particular to brainstorm potential causes of persistent low-level toxicity observed to Selenastrum algae	02/26/19	03/15/19	Matthew Heberger	✓	Meeting scheduled for Jun 24, 2019
186	Consider analyzing samples for additional metals. Jim Orlando to check prices for us.	02/26/19	03/05/19	Jim Orlando	✓	
187	Marie will send text messages in addition to emails if the TIE discussion is to take place on a weekend	02/26/19	04/30/19	Marie Stillway	✓	Marie has agreed to do this in the future.
188	Revise the QAPP with the proposed changes to the storm triggers for pesticides monitoring.	02/26/19	06/30/19	Matthew Heberger	✓	These are in Table 6.7 in the Google Docs version of the QAPP: https://docs.google.com/spreadsheets/d/1ywqcFrfOhnScM5zOqmBqM1HMaFK5LAeZV7f3VrHnusc/edit#gid=1505343848
189	Draft a new assessment question related to drinking water impacts for consideration by the TAC and SC (Matt, by March 10, 2019).	02/26/19	03/10/19	Matthew Heberger	✓	To discuss at a future meeting of (a) Pesticides Subcommittee, (b) TAC, (c) Steering Committee. See: https://docs.google.com/open?id=1VyR85nJc3MKSVrb5iMXhf5FWP51NuZ0USialvTycXDM&authuser=matth@sfei.org&usp=drive_fs Proposed question: 3. To what extent to current use pesticides contribute to human health risk in the Delta? A. Do pesticides occur at concentrations that exceed water quality regulatory values and benchmarks ("reference values") for human health?
190	Armand Ruby agreed to distribute a white paper having to do with pesticides and human health vs. ecotoxicity.	02/26/19	03/15/19	Armand Ruby	✓	Email reminder sent on 3/6/19.
191						
192	**Toxicity Work Group Action Items**					

	Task	Date Created	Due Date	Assigned To	Status	Comments
193	**Toxicity Work Group Meeting 2018-09-13**	**09/13/18**				
194	Marie to double check whether her lab can report biomass as an additional endpoint without incurring additional expense or running afoul of their contract with SWAMP.	09/13/18	10/01/18	Marie Stillway	✓	Marie confirmed that her lab can report biomass at no additional expense.
195	Share working draft of the QAPP with subcommittee members	09/13/18	09/15/18	Matthew Heberger	✓	
196	Send a reminder of how to access files on the Technical Advisory Committee (TAC) workspace website.	09/13/18	09/30/18	Matthew Heberger	✓	Detailed instructions for how to access Delta RMP data are here: https://sites.google.com/a/sfei.org/delta-rmp/data-access
197	AHPL to to send revised data to SWAMP where C. dubia tests were terminated at the wrong time.	09/13/18	10/15/18	Marie Stillway	✓	Marie confirmed that she sent revised results to Brian Ogg at the State Water Board in the last week of Sept 2018.
198	Get Melissa Morris' input on the mid-range EC control issue.	09/13/18	10/01/18	Matthew Heberger	✓	
199	Send the final sample frame shapefile to Joe D. and Jim O.	09/20/18	10/01/18	Matthew Heberger	✓	
200	**Toxicity Work Group Meeting 2018-11-09**					
201	Write up the new procedures agreed to related to low-conductivity controls for Ceriodaphnia toxicity testing; Share this with Marie and the group	11/09/18	11/15/19	Cam Irvine, Matthew Heberger	✓	
202	**Toxicity Work Group Meeting 2019-07-16**					
203	Share the cyanotoxins memo with the nutrients workgroup, and discuss with them whether they feel there is merit to measuring cyanotoxins more regularly	07/16/19	07/31/19	Matthew Heberger	🟡	Not enough time on their agenda for meeting in July 2019. To be addedt o a future agenda.
204	Add a bit more information about hold times and detection limits for the ELISA tests	07/16/19	07/31/19	Liz Miller	✓	
205	Fill in the missing benchmarks for compounds based on available tox data (ideally for algae), being clear enough in what values are chosen for the analysis that it is replicable	07/16/19	08/15/19	Danny McClure	🟡	
206	Talk to Tom Young (UC Davis) to learn more about what we could get out of doing the analysis - could we measure relative amounts? Ask him to speak to our group at a future meeting	07/16/19	07/31/19	Matthew Heberger	🟡	
207	Create a strawman proposal for the "lab overlap study, to include # of samples, costs, what's needed for analysis to happen - holding time & sample volume, measurement quality objectives, etc.	07/16/19	08/15/19	Don Yee, Liz Miller	🟡	
208	Distribute links to the QAPP	07/16/19	07/19/19	Matthew Heberger	✓	
209	Look into adding a CEDEN protocol code to flag Selenastrum tests using EDTA vs. not.	07/16/19	08/15/19	Brian Ogg	✓	From Brian: We decided to go with a straight forward approach and use the QA code "EDTA" for such treatments, along with a brief mention of the addition in the Tox Batch Comments field. It's worth noting that the addition of EDTA does not result in a "qualification" of the data under SWAMP's MQOs, but project staff is, as always, free to use the data as they see fit.
210	Figure out whether to document the issue with EDTA on our newly-proposed deviations from QAPP form	07/16/19	08/15/19	Matthew Heberger	🟡	
211	Send out a poll to choose a date/time for the next meeting	07/16/19	07/19/19	Liz Miller	🔴	
212						
213	**Data Management Subcommittee Action Items**					
214	**Data Management Subcommittee Meeting 2018-04-25**					
215	Send the final meeting summary	04/25/18	05/10/18	Matthew Heberger	✓	
216	Send the Data Management SOP to the group once our QAO has had a chance to review it.	04/25/18	05/15/18	Matthew Heberger	✓	
217	Create some graphics or a flowchart that shows how we manage data	04/25/18	05/31/18	Amy Franz	✓	
218	**Data Management Subcommittee Meeting 2018-06-26**					
219	Add dates/times to flowchart of Current Use Pesticides Data Management and Quality Assurance	06/26/18	07/31/18	Amy Franz	✓	
220	Add dates/times to flowchart of Current Use Pesticides Data Management and Quality Assurance	06/26/18	07/31/18	Amy Franz	✓	
221	Add USGS QA/QC review and data management process details to the flowchart. See Selina's listed suggestions	06/26/18	07/31/18	Amy Franz, Matthew Heberger	✓	
222	Bev to follow up with Melissa Morris and with Greg Gearheart to find out if data in NWIS only will suffice	06/26/18	07/31/18	Beverly Anderson-Abbs	✓	
223	Make a list of pros and cons of stopping NWIS data translation to CEDEN. Also identify the appropriate level of QA/QC effort necessary by USGS and ASC to reduce duplication of data management tasks and identify cost savings accordingly.	06/26/18	07/31/18	Amy Franz, Jim Orlando	✓	
224	Send comments concerning the SOP to Matt by COB on Wed, June 27.	06/26/18	07/27/18	Subcommitee Members	✓	
225	Add a Corrective Action Protocol that details lines of responsibility in the QAPP regarding who at the lab is responsible, what specific actions will be triggered if a batch fails the QC process, and who should be notified.	06/26/18	07/31/18	Amy Franz, Matthew Heberger	🔴	
226	In the QAPP, add a description of all QA/QC performed on the data, by USGS and ASC. Add a timeline for which things happens once vs. monthly vs. quarterly.	06/26/18	07/31/18	Amy Franz, Matthew Heberger	🔴	
227	Ask Wes Heim, where does MLML store their data and in what format? Other than what they submit to us? Do they have some kind of database?	06/26/18	07/31/18	Selina Cole	✓	Selina wrote: "I spoke to Wes about this a few months ago and he is not aware of any other database being used by MLML to store Delta RMP data."
228	**Data Management Subcommittee Meeting 2019-01-16**					

	Task	Date Created	Due Date	Assigned To	Status	Comments
229	Any member who wishes, please provide input or edits to the mission statement	01/16/19	01/31/19	Subcommittee Members	✓	"The data management subcommittee reviews policies and procedures related to data management and quality assurance and makes recommendations related thereto, with a goal of having the program collect high quality data that is usable and widely accessible, and in the most efficient and cost-effective way possible."
230	Discuss the issue of batch vs. submittal flagging at a future TAC meeting.					
231	ASC should plan to include a data management plan in all future technical proposals for monitoring or special studies	01/16/19	03/15/20	Matthew Heberger		
232	**Data Management Subcommittee Meeting 2019-03-26**					
233	Provide some additional details about the "QA lite" that ASC has proposed to do with each batch of pesticides data as it arrives? Matt to check with Amy and Don.	03/26/19	06/30/19	Matthew Heberger	✓	The Data Management Subcommittee and staff agreed it was appropriate to review the pesticides data in two batches. Each round will be a full QA review. Staff typically do a "completeness check" with each provisional dataset as it arrives.
234	Add some info to the workplan and QAPP about the process of communication between ASC and the lab. Send a few sentences about this to Selina to include in a memo to the TAC.	03/26/19	06/30/19	Matthew Heberger		
235	Continue to document and summarize our business rules for applying flags in our Data Management and Quality Assurance SOP. (This is a todo in FY19-20).	03/26/19	06/30/19	Amy Franz, Don Yee, John Ross, Matthew Heberger		As of late July 2019, this is 90% finished, and the work will be presented to the Data Management Subcommittee at its next meeting.
236	Amy to look into what happens when the collection records are duplicate for the tox and pesticide data. (Potential to create some conflict.)	03/26/19	06/30/19	Amy Franz	✓	We discussed with Brian Ogg, and he indicated this would not cause any problems, and is a non-issue in his mind.
237						
238	**Finance Committee Action Items**					
239	For the next finance update, also include a project progress update. Highlight progress on deliverables, any changes that have been made to monitoring plans, warning of any delays.	05/02/18	01/15/19	Matthew Heberger	✓	To be included in the next Finance Update and at subsequent SC meetings. It became clear that the "stoplight reports" are not serving the needs of the group, who wish to have greater insight into project progress. Update Oct 2018: To be included in the next quarterly finance report. Now that we have created a thorough "waterfall" Gantt Chart for the entire project, we will report on "% Complete" and "% of Budget Spent" for tasks and subtasks in future quarterly reports.
240	Create a spreadsheet that we can share with Finance Committee members that show more financial details (Selina to provide template)	05/02/18	07/15/18	Matthew Heberger	✓	I reminded Selina about this and she no longer remembered what this was.
241	From now on, do not change budgets unless there has been a major change in scope or deliverables. Keep budgets the same and maybe spend more or less on different tasks and subtasks but don't actually transfer money in the budget.	07/02/18	12/31/18	Matthew Heberger	✓	Implementing this new policy beginning in FY18/19. In the past, we re-allocated funds among subtasks at the request of the Finance Committee. At the time, they preferred that we "move $2,000 from Task 1A to 1B" rather than simply going overbudget on one task and staying under on another. From our point of view, either practice is acceptable, although the former is simpler.
242						
243	**Nutrients Subcommittee Action Items**					
244	Work with Janis to schedule subcommittee meetings for November, February, and March.	09/25/18	10/15/18	Matthew Heberger	✓	
245	Send Brian Bergamaschi any ideas or suggestions for analyses or visualization of the USGS high-frequency monitoring data	02/26/19	03/15/19	Nutrients Subcommittee members	✓	ASC staff provided comments. I do not know how many other subcommittee members were in touch with Brian, but they received reminders to do so.
246	Russ Brown will provide Brian Bergamaschi his spreadsheet model to determine the residence time based on flow and travel time. Russ will also provide Brian some examples using a branched channel format to display concentrations rather than the color-coded format Brian's ESRI mapping program used	02/26/19	03/10/19	Russ Brown	✓	
247	Regarding the FY19-20 proposal for Delta nutrients monitoring during planned shutdowns of discharge from Regional San, Matt to assess the amount of funds for ASC to perform contract management of the three contracts under this project. General assumption was a standard 10%.	02/26/19	03/15/19	Matthew Heberger	✓	
248	Subcommittee members should send Janis any questions on project tasks as Lisa and Janis will be firming up the budget.	02/26/19	03/15/19	Nutrients Subcommittee members	✓	
249	Janis will send Subcommittee members an email on next steps for submitting proposal recommendations to RMP.	02/26/19	03/15/19	Janis Cooke	✓	
250						
251	**CEC Subcommittee Action Items**					
252	**CEC Subcommittee Meeting 2018-08-22**					
253	Consult with colleagues to provide a review of the budget with consideration of a more detailed plan	08/22/18	08/31/18	Matthew Heberger	✓	
254	Develop a timeline/Gantt Chart prior to the Joint Meeting to include interim deliverables and points for stakeholder input.	08/22/18	10/15/18	Matthew Heberger	✓	
255	Provide a timeline for the QAPP and information that can be provided to the Joint Meeting	08/22/18	10/15/18	Matthew Heberger	✓	
256	Develop a budget for Prop 1 application and notify the co-chairs and Finance Committee of intent to apply.	08/22/18	10/26/18	Matthew Heberger	✓	
257	Fill in technical details for the sampling plans including sampling methods and number of clams needed	08/22/18	01/30/19	Matthew Heberger	✓	
258	Ask Melissa Morris whether an individual QAPP or a QAPP added to the Delta RMP is preferred.	08/22/18	08/31/18	Dawit Tadesse	✓	Confirmed 23 August 2018 the QAPP should be developed as an individual plan
259	Provide a link to the Hood CEC study.	08/22/18	08/31/18	Brian Laurenson	✓	Link sent via email on 22 August 2018.
260	Provide CEC Reports from Region 1 and Region 4.	08/22/18	08/31/18	Dawit Tadesse	✓	Reports sent via email on 23 August 2018
261	Update the CEC subcommittee on progress regarding the SEP policy amendment and development of the SEP proposal.	08/22/18	09/30/18	Patrick Morris	✓	Patrick gave an update at the CEC meeting in Dec 2018.
262	**CEC Subcommittee Meeting 2018-10-10**					

	Task	Date Created	Due Date	Assigned To	Status	Comments
263	Prepare a proposed schedule (Gantt chart) with interim deliverables and opportunities for input for the CEC Subcommittee to review before inclusion in the agenda package for the SC/TAC Joint Meeting	10/10/18	10/16/18	Matthew Heberger	✓	
264	Work with Brian Laurenson on a report out for the SC/TAC Joint Meeting	10/10/18	10/21/18	Matthew Heberger	✓	
265	Obtain letters of support for the CEC Prop 1 grant proposal	10/10/18	10/21/18	Matthew Heberger	✓	
266	**CEC Subcommittee Meeting 2019-02-24**					
267	ASC to research whether it would be desirable to measure grain size distribution for sediment	02/14/19	03/15/19	Matthew Heberger	✓	
268	Matt to verify the target list of analytes in the State Guidance to check which ancillary parameters are required/recommended.	02/14/19	03/15/19	Matthew Heberger	✓	
269	Brian to send Matt the name of his contact at MWQI.	02/14/19	03/15/19	Brian Lauerson	✓	
270	Matt to contact MWQI about the possibility of cost-sharing or piggybacking.	02/14/19	03/15/19	Matthew Heberger	✓	
271	Matt to look at the Aquatic Ecosystems Dashboard to see whether it contains any information on what other ancillary parameters were collected during CEC studies.	02/14/19	03/15/19	Matthew Heberger	✓	Nothing listed beyond organic compounds.
272	Matt to look into costs for bird egg sampling	02/14/19	03/15/19	Matthew Heberger	✓	
273	Matt to research whether these species have good site fidelity.	02/14/19	03/15/19	Matthew Heberger	✓	
274	ASC to research what size range of clams is desirable. See if there is language about this in related studies or guidance documents.	02/14/19	03/15/19	Matthew Heberger	●	
275	Brian L. will send Matt the targets that the Coordinated Monitoring Program (CMP) used for the Sacramento urban area.	02/14/19	03/15/19	Brian Lauerson	✓	
276	**CEC Subcommittee Meeting 2019-04-03**					
277	Matt to ask Bryn Phillips, who runs the SPOT monitoring, if the site on the American River at Discovery Park is one of the SPOT monitoring locations, or if they are stopping there especially for us. Also need to confirm that their sampling methodology and equipment is appropriate for CEC sample collection, compatible with other field crews	04/03/19	04/15/19	Matthew Heberger	✓	
278	Matt to compile information on what questions we are seeking to answer by analyzing bird eggs.	04/03/19	04/15/19	Matthew Heberger	✓	
279	Selina to send some information from her birding app on where cormorant nests may be in the Delta.	04/03/19	04/15/19	Selina Cole	✓	From Selina: There are several apps out there by the National Audubon Society, but the Audubon Bird Guide app has a great feature – you can download field guide data to access photos, audio, and range maps offline. It also has a bird alert notification system you can set up to get alerts when a particular bird species of interest is in your proximity (has been spotted nearby). There are also various "twitcher" groups (amature ornithologists) that have similar info available online. Just depends on what you're looking for.
280	Document the method for clam tissue homogenization more thoroughly	04/03/19	04/15/19	Matthew Heberger	●	
281	Insert into the plan that the CEC Subcommittee will meet after fish collection and before the fish are shipped to the lab, so the committee can make a recommendation on which species to analyze.	04/03/19	04/15/19	Matthew Heberger	✓	
282	ASC to consider adding Weck to analyze galaxolide and other compounds.	04/03/19	04/15/19	Matthew Heberger	✓	See Analyte Comparison Table for a thorough exposition of which lab should analyze which analyte for each matrix: https://docs.google.com/spreadsheets/d/1mVm7aeRM0CxBj5HWpDL0eClRJdF3rLg8y2TwV_59_r8/edit#gid=1103446397
283	Matt to put together a side-by-side comparison of the competing labs, listing price, MDL, and RL, as it relates to the MTL or other threshold we are trying to be lower than.	04/03/19	04/15/19	Matthew Heberger	✓	See Analyte Comparison Table: https://docs.google.com/spreadsheets/d/1mVm7aeRM0CxBj5HWpDL0eClRJdF3rLg8y2TwV_59_r8/edit#gid=1103446397
284	Define "batch" in the QAPP and tables.	04/03/19	04/15/19	Matthew Heberger	●	
285	Matt to specify in the QAPP (and change budget if necessary) that labs should run an LCS and MS at a minimum rate of one per batch.	04/03/19	04/15/19	Matthew Heberger	●	
286	Matt to get details about what exactly a "minimalist" quarterly QA would entail.	04/03/19	04/15/19	Matthew Heberger	✓	Essentially a completeness check on the data, basic review of blanks and duplicates to detect major problems.
287	Ask labs how long they retain records, and whether they could prepare a Level IV data package for us in the future upon request.	04/03/19	04/15/19	Matthew Heberger	●	
288	If we get the Prop 1 grant, and will be doing non-targeted analysis, ask Dr. Tom Young if the Level IV data package has information that would be useful to him.	04/03/19	04/15/19	Matthew Heberger	✓	We received word that we did not receive the grant, so this was a moot point.
289	CEC Subcommittee members should submit comments on the draft QAPP by April 19.	04/03/19	04/15/19	Matthew Heberger	✓	Received a few comments from subcommittee members.
290	**CEC Subcommittee Meeting 2019-04-24**					
291	Add site-specific collection methods to the QAPP	04/24/19	05/15/19	Matthew Heberger	✓	
292	Request documentation of sample collection methods of the SPOT program from Bryn Phillips	04/24/19	04/30/19	Matthew Heberger	✓	
293	Check on Lisa Thompson's membership status in the mailing list	04/24/19	04/30/19	Matthew Heberger	✓	Her Google account had been automatically disabled. We were able to help her re-enable.
294	Ask Vista laboratory whether they will report chemical analytical results below the MDL, and whether there is any update on their effort to obtain lower MDLs	04/24/19	04/30/19	Matthew Heberger	✓	Yes, they will report below the MDL if they are confident it is a detect. They have not made progress on doing studies that would lower their MDL.
295	Ask SFEI's CEC lead scientist Rebecca Sutton about whether there are new thresholds for PFAS compounds that may have been recently published	04/24/19	04/30/19	Matthew Heberger	✓	There are no new ecotoxicological thresholds that she is aware of. However, Becky cautioned me that experience matters when it comes to analyzing PFAS compounds. Not every lab who offers this service has the experience to produce robust results.
296	Report back to the subcommittee via email on the outcomes of the last two items as soon as possible	04/24/19	04/30/19	Matthew Heberger	✓	Email sent on 5/6 with the lab choice.

	Task	Date Created	Due Date	Assigned To	Status	Comments
297	Consider applying for Supplemental Environmental Project (SEP) funds to cover components of the study that were part of our unsuccessful Prop 1 proposal	04/24/19	08/31/19	Matthew Heberger, Selina Cole	🟡	Matt will work with Patrick on this. (Selina now that Patrick is retired!)
298	Add information to the QAPP explicitly stating that the additional analytes will be QA'ed and uploaded to CEDEN	05/21/19	05/31/19	Matthew Heberger	🔴	Have not been able to complete as we have not finalized choice of labs.
299						
300	**Chlorophyll Intercalibration Work Group Action Items**					
301	Invite Stephanie Smith from YSI to participate in our study by attending meetings and/or reviewing documents	03/15/19	04/05/19	Liz Stumpner	✓	
302	Add the grab sample results to the time series plots	03/16/19	03/25/19	Matthew Heberger	🔴	
303	If you have ideas or suggestions for additional analyses, please send them to Matt	03/17/19	03/29/19	WG members	✓	
304	Create a project page on the Delta RMP Workspace website for project files and documents	03/18/19	03/29/19	Matthew Heberger	🔴	
305	Inquire about the availability of the DWR vessel, the Sentinel	03/19/19	03/29/19	Mike Dempsey	✓	
306	Ask Raphael Kudela, UC Santa Cruz, to participate in the study	03/20/19	04/10/19	Dave Senn	✓	
307	Remind labs to fill out the survey about their methods	03/21/19	03/29/19	Liz Stumpner	✓	
308	Send Matt the names and contact information for the 3 new labs that agreed to participate in the study	03/22/19	03/29/19	Liz Stumpner	✓	
309	Find out which lab Jim Cloern uses	03/23/19	03/29/19	Liz Stumpner	✓	They analyze chl-a in their own lab.
310	Contact Dr. Anke Mueller-Solger and ask whether she has any information or analysis to contribute to our study	03/24/19	03/29/19	Dave Senn	✓	
311						
312	**Informal Action Items**					
313	Add to the next finance memo: "bank account" style statement that shows at a glance how much money we have, how much we are expecting, and how much in savings.	02/12/18	04/15/18	Matthew Heberger	✓	Added to the 2018 Q1 Finance Memo. Requesting feedback on the format.
314	Send twice yearly roster updates to RB5 staff to update on the website. This is an appendix to the Charter	05/15/18	07/31/18	Matthew Heberger	✓	Request by Selina Cole
315	Send twice yearly roster updates to RB5 staff to update on the website. This is an appendix to the Charter	05/15/18	12/31/18	Matthew Heberger	✓	Sent 2018-10-29
316	Twice yearly, post roster updates on the website. This is an appendix to the Charter	05/15/18	07/31/19	Matthew Heberger	🟡	
317	Twice yearly, post roster updates on the website. This is an appendix to the Charter	05/15/18	12/31/19	Matthew Heberger	🟢	
318	Consider updates to 2 sections of the charter. How data is managed and when it is released, and Conflict of Interest.	06/18/18	10/01/18	Matthew Heberger	✓	Request by Greg Gearheart. We have not received a specific proposal for what changes to make. Current understanding is that the Data Management Subcommittee is looking into these issues and will make recommendations.
319	Ask subcommittees whether there are projects or reports that would benefit from feedback from our science advisors	07/19/18	08/31/18	Matthew Heberger	✓	Placed on the agenda for the Pesticides Subcommittee
320	Respond in writing to Melissa Turner's comments on the FY16/17 Pesticides data and QA memo	08/13/18	08/31/18	Don Yee	✓	
321	Create a poster for the Bay Delta Science Conference and present it to the SC for approval at their July 2018 meeting	05/07/18	07/07/18	Matthew Heberger	✓	Notification sent via email as it was not ready in time for the SC meeting in July. Poster presented at BDSC, Sept 10 -12.
322	Put in place a contract between ASC and Caltrans so that they can contribute financially to the Delta RMP and fulfill their requirements to conduct Delta Mercury Control Program (Delta Mercury TMDL) monitoring and other monitoring in the Delta. Approval letter from RB5 dated 2018-05-16 (on file).	05/16/18	10/15/18	Patrick Walsh	✓	
323	Adam to speak to Tom Mumley regarding Contra Costa County's contribution to the Delta RMP. The County has a Phase 1 MS4 permit for its unincorporated areas. It straddles both Region 2 (Bay) and Region 5 (Central Valley), however the majority of the population is in the Bay. In 2015, there was discussion of asking them to contribute to the Delta RMP. RB5 staff and leadership would like for the County to begin paying their fair share to the Delta RMP.	07/20/18	08/31/18	Adam Laputz	✓	Adam informed Matt in Sept 2018 that this conversation took place. Central Valley Board staff should follow up with Contra Costa County if their stormwater discharge permit will be modified to require their participation in the Delta RMP.
324	Send twice yearly roster updates to RB5 staff to update on the website. This is an appendix to the Charter.	05/01/18	01/31/19	Matthew Heberger	✓	Update sent on 5/19/2019.
325	Consider an amendment to the Communication Plan (or next year's workplan?) that says we plan for 2 rounds of review for most reports. Any more than this would be considered an exception and would need certain approvals (?), timeline extension, and budget increase.	10/23/18	06/30/19	Delta RMP SC	🔴	Bring to the SC at a future meeting. See file Google Drive\Delta RMP\Delta RMP Documents\Foundational Documents\Communication Plan\Communications Plan Potential Update 2018-10-23.txt
326	Consider drafting a State Board resolution on guiding principles and minimum expectations for regional monitoring programs.	11/15/18	03/31/19	Greg Gearheart	✓	From a meeting with Greg on Nov 15. He proposed this to help clarify common issues and pitfalls that crop up with collaborative monitoring projects around the state. The state allows dischargers to participate in these programs, and they are a form or regulatory relief. In return, there should be a set of minimum standards around quality assurance, timeliness of reporting, etc. Checking as done as it is beyond our scope to track this State Board initiative.
327	SFEI staff will meet with Melissa Morris for training/ discussion around SWAMP expectations for Quality Assurance Program Plans (QAPPs), Data Quality Assessment, and other Data Management and Quality Assurance issues.	11/15/18	02/28/19	Matthew Heberger	✓	Training held on Jan 7, 2019.
328	Update the Data Management and Quality Assurance SOP document, with a specific focus on how mercury data is managed.	11/15/18	09/30/19	Amy Franz	✓	Unfunded task which requires a significant effort. Planning to include funding request into next fiscal year's workplan. Update April 2019: There are unused funds in the FY18-19 budget, and I have asked our data services team to work on this document.

	Task	Date Created	Due Date	Assigned To	Status	Comments
329	Write a memo on how stakeholders ought to communicate with labs through the contract manager, rather than calling or emailing them directly with questions, which it is felt is inefficient and inappropriate. (Melissa is the contract manager for toxicity testing at the Aquatic Health Program Laboratory at UC Davis (AHPL), and Matt is the contract manager for pesticides chemistry at USGS Organic Chemistry Research Laboratory (OCRL).	11/15/18	12/31/18	Matthew Heberger	✓	To include in the agenda package for the next TAC meeting and/or SC meeting.
330	Invite the group of regulators and staff (State Board, Regional Board, and SFEI staff) to have a meeting 2-4 times per year to "caucus" as necessary in advance of Steering Committee meetings.	11/15/18	02/15/19	Matthew Heberger	✓	Matt has reminded agency staff about this twice.
331	Consider putting in place policies around how long stakeholders have to review drafts, how many opportunities they will be given to review	11/15/18	03/31/19	Matthew Heberger	✓	Proposal: plan for 2 review periods for most documents, especially important ones. A single review period should suffice for things such as meeting summaries, memos, etc. There will be a draft > comments > final draft > comments > final. After each of the 2 rounds of review, a response to comments will be issued, compiling the major comments and suggested edits into one document, and with a brief explanation of how the authors responded to the comment. This document will exclude minor comments, comments about formatting, grammar, spelling, style, etc.
332	Consider formalizing "Rules of Order" for meetings, as it is felt we would benefit from having more structure and formalized decision making.	11/15/18	03/31/19	Matthew Heberger	✓	Ad hoc committee on governance discussed this and did not make concrete recommendations.
333	Send Matt suggestions or proposed revisions to the Charter related to SC decision-making and governance, particularly as it relates to the creation of new seats on the Steering Committee.	12/19/18	01/15/19	Dan Riordan, Dave Tamayo, Debbie Webster, Greg Gearheart, Patrick Morris, Rebecca Franklin, Selina Cole, Stephanie Hiestand	✓	As a result of an ad hoc subcommittee on governance, charged with examining how votes are allocated and how new SC seats are created. To be discussed at a follow-up meeting on Jan 31.
334	Draft a template of a comment that can be inserted into the CEDEN database comment for cases in the C. dubia toxicity test where sample conductivity is low, but the control does not meet test acceptability criteria and therefore the sample is compared to the regular medium-hardness control. In cases like these, the sample may be shown as toxic, but it may not be (entirely) due to toxic contaminants, but rather due to a deficiency of ions that these organisms need in order to thrive.	03/22/19	03/28/19	Cam Irvine, Melissa Turner	✓	
335	Make proposed edits to the QAPP document and circulate these changes to this group for comment	03/22/19	04/05/19	Matthew Heberger	✓	
336	Ask contacts at SCCWRP for recommendations for aquatic toxicity testing labs	03/11/19	03/29/19	Matthew Heberger	✓	
337	Ask Wes Heim if the cost share that we get from Moss Landing would still be applicable if the funds were coming via a state contract.	03/11/19	03/29/19	Matthew Heberger	✓	After Wes checked with Office of Sponsored Programs and San Jose State University, the response was that, no, a cost share would not be available for a state contract.
338	Make a plan to consider options for our toxicity spending in FY19-20. The SWAMP contract only goes through March 2020, so will not cover the entire Water Year. We will need to transition to our own spending. It should be lean and cost effective since it is our own money.	03/11/19	03/29/19	Matthew Heberger	✓	Update Apr 2019: Have discussed this issue with Coordinating Committee. Our preference is to use State Board funds to contract with Moss Landing Marine Laboratory for mercury monitoring. Will be part of the workplan creation, but should have a strawman proposal for Coordinating Committee in advance.
339	Communicate new policy related to expanded mercury monitoring to the Steering Committee	03/11/19	03/29/19	Adam Laputz, Patrick Morris	✓	Previously, the thinking was that we were putting a lot of resources into Hg monitoring in support of the Mercury TMDL, which had a strict deadline for information that could be considered in the rulemaking, and then we would drop down to a lower level of surveillance monitoring. However, now DWR has joined the program, and they are our largest financial contributor. They have joined as a condition of their CWA Section 401 Certifications for wetland restoration projects. They were allowed to drop certain monitoring activities as a result, and are contributing the Delta RMP instead. And one of the key concerns of these projects is that mercury in wetland sediment could be remobilized and/or methylated (converted to its more toxic organic form). Therefore, it is appropriate that we direct more resources to this area.
340	If the SC approves funding for lunches at meetings, set it up with our admin department (see howto notes from Anna), ask our contacts in Sacramento if they know of good, reliable caterers.	05/20/19	06/15/19	Matthew Heberger	✓	
341	Plan to send TAC and SC agenda packages so they come out 2 weeks (10 business days) before meetings in the future.	05/20/19	07/31/19	Matthew Heberger	🟡	From a conversation with Patrick Morris and Meredith Howard. They (Central Valley Water Board Staff) are working on being better coordinated. They would like to have a week to review agenda packages, then a week in which they could meet before the meeting. 5 business days just isn't enough for them. Even more important if they're expected to coordinate with folks from the State Board, etc. Meredith stressed that we should send them out even if they are not 100% complete. They would rather have some of the materials so they can get started reading, then receive the remaining pieces later. Working toward this, but it will take a couple of meetings to gear up, as there are many pieces that make up the agenda package, and these typically involve multiple collaborators.
342	Ask the Finance Committee Meetings if they'd prefer for me to schedule the meetings from now on. If not, send a reminder to a Finance Committee representative to schedule the meeting well in advance of future meetings. Better yet, schedule them as soon as we know the dates for upcoming SC meetings. The sooner they are in the calendar, the better for our planning purposes.	05/20/19	07/31/19	Matthew Heberger	🟡	Dalia Fadl used to do this, but it is appropriate for ASC to take over this function now that she has left the committee. Email sent in July 2019, but not resolved.
343	Develop a proposed scope of work and budget to take over the Delta RMP website from the Central Valley Board. Per Adam, they are interested in handing it off to us.	06/02/19	07/15/19	Matthew Heberger	✓	As of 7/4, we have created a new Delta RMP website at sfei.org/DeltaRMP and are ready to take over management of it.
344	Fill out the "sole source justification" forms for RMA and AMS, subcontractors in the Sacramento River Nutrient Change Study.	06/02/19	07/07/19	Matthew Heberger	✓	Justification is that they helped us write the monitoring proposal, in other words, contributed their intellectual property and know-how. According to the Charter: "The requirement for a competitive process may be waived by the Implementing Entity when it determines that there is only one source for the merchandise or service needed, and no other product/service reasonably meets the stated need or specifications. Criteria that may be considered in agreeing upon a sole source contract include, for example: unique or specialized technical expertise, unique or specialized access to data or information, a joint venture already specified in a proposal, and access to matching funds or in-kind services."
345	Do a final pass through our Data Management and Quality Assurance SOP and accept or reject all suggested edits.	07/10/19	07/20/19	Amy Franz	🔴	
346	Do a final proofread of the revised Data Management and Quality Assurance SOP and transmit the document to Melissa Morris at State Board. Consider whether we need to pull the comments and replies out of the document and handle them separately.	07/10/19	07/25/19	Matthew Heberger	🔴	