



RMP

REGIONAL MONITORING
PROGRAM FOR WATER QUALITY
IN SAN FRANCISCO BAY

sfei.org/rmp

Technical Review Committee

December 13, 2018

10:00 AM – 3:30 PM

REMOTE ACCESS

Audio by Phone: 1.415.594.5500, Access Code 943-326-397#

Slides: <https://join.me/sfei-conf-cw1>

AGENDA

1.	Introductions and Review Agenda	10:00 Bridgette DeShields
2.	Decision: Approve Meeting Summary from September 19, 2018 and confirm/set dates for future meetings. Scheduled meetings: TRC: 3/14/19 TRC: 6/13/19 TRC: 12/12/19 Proposed meetings: TRC: 9/26/19 Materials: Pages 6-13 <ul style="list-style-type: none">September 19 Meeting Summary Desired outcomes: Approve meeting summary, set the dates for future meetings.	10:10 Bridgette DeShields
3.	Information: Multi-Year Planning Workshop and SC Meeting Summary from October 24, 2018 Topics discussed at the October SC meeting included: <ul style="list-style-type: none">2019 Multi-Year Plan and the process for planning 2020 special studiesRMP Financial update and 2020 fee confirmation	10:20 Jay Davis

	<ul style="list-style-type: none"> ● Approval of additional funding for North Bay Fires CECs work ● Approved 2019 Budget and Detailed Workplan ● Theme for the 2019 Pulse: Sources, Pathways, and Loadings <p>Materials: Pages 14-23</p> <ul style="list-style-type: none"> ● October 24 Meeting Summary <p>Desired Outcome: Informed committee</p>	
4.	<p>Decision: Multi-Year Planning</p> <p>The SC decided that planning budgets for the workgroups should be set at the “must-do” levels identified by the workgroup leads, plus a “buffer” of some percentage (e.g., perhaps 10%). The SC directed the TRC to decide how large the buffer should be.</p> <p>Materials: None</p> <p>Desired outcomes:</p> <ul style="list-style-type: none"> ● Decision on the amount of buffer to include in the workgroup planning budgets. 	10:40 Jay Davis
5.	<p>Information/Decision: Presentation on South Bay Margins Study</p> <p>A draft technical report on the South Bay margins samplings is nearing completion. A Powerpoint summary of the results and conclusions will be presented. This will set the stage for a discussion of the next steps in margins sampling.</p> <p>Materials: A Powerpoint will be presented at the meeting.</p> <p>Desired outcomes:</p> <ul style="list-style-type: none"> ● Decision: Should we sample North Bay margins in 2020 (next sampling in S&T schedule)? ● Decision: Should we analyze margins archives for legacy pesticides? 	11:00 Don Yee
	LUNCH (provided)	12:00

6.	<p>Discussion: 2019 Pulse and Communications Update</p> <p>The SC selected “Sources, Pathways, and Loadings” as the theme for the 2019 Pulse.</p> <p>Materials: Pages 24-30</p> <ul style="list-style-type: none"> ● Annual Meeting survey results ● Rough draft Pulse outline <p>Desired outcomes:</p> <ul style="list-style-type: none"> ● Feedback on the Annual Meeting ● Input on the Pulse outline 	12:30 Jay Davis
7.	<p>Information: Dr. Karina Nielsen from SFSU on Ocean Acidification</p> <p>Dr. Nielsen will provide an update on her studies of ocean acidification and the first year of results from the moored sensor near Tiburon.</p> <p>Materials: None</p> <p>Desired outcomes:</p> <ul style="list-style-type: none"> ● Informed committee 	1:00 Karina Nielsen
8.	<p>Decision: RMP Data Visualization Challenge Final Judging</p> <p>Materials: Pages 31-38</p> <ul style="list-style-type: none"> ● Challenge submissions <p>Desired outcome: Choose winners of data visualization challenge and discuss process.</p>	1:45 Cristina Grosso
9.	<p>Information: Data Services and Informatics Update</p> <p>Annual update on informatics activities:</p> <ul style="list-style-type: none"> ● Updates to CD3 ● Progress on current year datasets ● Database maintenance tasks completed ● Data expected for 2019 <p>Materials: None</p>	2:40 Amy Franz Cristina Grosso

	Desired outcome: <ul style="list-style-type: none"> • Informed committee 	
10.	Information: Status of Deliverables and Action Items Materials: Pages 39-53 Desired outcome: Informed committee	3:10 Jay Davis
11.	Discussion: Plan Agenda Items for Future Meetings Desired outcome: Identify future agenda items.	3:20 Jay Davis
12.	Discussion: Plus/Delta	3:25 Bridgette DeShields
13.	Adjourn	3:30

Recently Completed RMP Reports/Products

Davis, J. 2018. 2018 Regional Monitoring Program Update. SFEI Contribution No. 906. San Francisco Estuary Institute : Richmond, CA.

<https://www.sfei.org/documents/rmp-update-2018>

Gilbreath, A.; Wu, J.; Hunt, J.; McKee, L. 2018. Pollutants of Concern Reconnaissance Monitoring Water Years 2015, 2016, and 2017. SFEI Contribution No. 840. San Francisco Estuary Institute: Richmond, CA.

<https://www.sfei.org/documents/pollutants-concern-reconnaissance-monitoring-water-years-2015-2016-and-2017>

Lin, D.; Sutton, R. 2018. Alternative Flame Retardants in San Francisco Bay: Synthesis and Strategy. SFEI Contribution No. 885. San Francisco Estuary Institute : Richmond, CA.

<https://www.sfei.org/documents/alternative-flame-retardants-san-francisco-bay-synthesis-and-strategy>

Lin, D.; Sutton, R.; Sun, J.; Ross, J. 2018. Screening of Pharmaceuticals in San Francisco Bay Wastewater. SFEI Contribution No. 910. San Francisco Estuary Institute : Richmond, CA.

<https://www.sfei.org/documents/screening-pharmaceuticals-san-francisco-bay-wastewater>

Salop, P.; Franz, A. 2018. 2018 RMP Sediment Cruise Report. SFEI Contribution No. 907. San Francisco Estuary Institute : Richmond, CA.

<https://www.sfei.org/documents/2018-rmp-sediment-cruise-report>

Schoellhamer, D.; McKee, L.; Pearce, S.; Kauhanen, P.; Salomon, M.; Dusterhoff, S.; Grenier, L.; Marineau, M.; Trowbridge, P. 2018. Sediment Supply to San Francisco Bay. SFEI Contribution No. 842. San Francisco Estuary Institute : Richmond, CA.

<https://www.sfei.org/documents/sediment-supply-san-francisco-bay>

Sedlak, M.; Sutton, R.; Wong, A.; Lin, D. 2018. Per and Polyfluoroalkyl Substances (PFAS) in San Francisco Bay: Synthesis and Strategy. SFEI Contribution No. 867. San Francisco Estuary Institute : Richmond, CA.

<https://www.sfei.org/documents/and-polyfluoroalkyl-substances-pfass-san-francisco-bay-synthesi-s-and-strategy>

Shimabuku, I.; Trowbridge, P.; Salop, P. 2018. 2018 RMP Bivalve Retrieval Cruise Plan. SFEI Contribution No. 893. San Francisco Estuary Institute: Richmond, CA.

<https://www.sfei.org/documents/2018-rmp-bivalve-retrieval-cruise-plan>

Wu, J.; Trowbridge, P.; Yee, D.; McKee, L.; Gilbreath, A. 2018. RMP Small Tributaries Loading Strategy: Trends Strategy 2018. SFEI Contribution No. 886. San Francisco Estuary Institute : Richmond, CA.

<https://www.sfei.org/documents/rmp-small-tributaries-loading-strategy-trends-strategy-2018>



Bay RMP Technical Review Committee Meeting

September 19, 2018

San Francisco Estuary Institute

Meeting Summary

Attendees

TRC Member	Affiliation	Representing	Present
Nirmela Arsem	EBMUD	POTWs	
Mary Lou Esparza	CCCSD	POTWs	yes
Tom Hall	EOA, Inc.	POTWs	phone
Ross Duggan	SFPUC	POTWs	yes
Simret Yigzaw	City of San Jose	POTWs	yes
Bridgett DeShields*	Integral Consulting	Refineries	yes
Chris Sommers	BASMAA	Stormwater	yes
Shannon Alford	Port of SF	Dredgers	
Ian Wren	San Francisco Baykeeper	NGOs	yes
Richard Looker	SFBRWQCB	Water Board	yes
Luisa Valiela	USEPA	US-EPA IX	yes
Sheila Swett	USACE	USACE	yes
Naomi Feger	SFBRWQCB	Water Board	

*Chair

Guests and Staff

- Paul Salop - AMS
- Anna Hansen - City of San Jose
- Jay Davis - SFEI
- Phil Trowbridge - SFEI
- Ila Shimabuku - SFEI
- Don Yee - SFEI
- Nina Buzby - SFEI
- Cristina Grosso - SFEI
- Rebecca Sutton - SFEI
- Diana Lin - SFEI

1. Introductions and Review Agenda

Phil Trowbridge welcomed members of the Committee, quickly presented the agenda for the day, and allowed for introductions.

2. Decision: Approve Meeting Summary from June 14, 2018 and confirm/set dates for future meetings

No changes were made to the June 14 meeting summary before approval. Sheila Swett and Richard Looker were the only present TRC members not registered for the event. Chris Sommers asked to see the list of Annual Meeting registrations, to confirm that the desired audience would be present. (The TRC reviewed the list of registered attendance after lunch and did not have any concerns about those already registered.). Committee members were reminded of the October 24, 2018 Multi-Year Planning Workshop. There were no conflicts with the proposed dates for the March, June, or December 2019 TRC meetings. Bridgette DeShields mentioned a conflict with the September 2019 TRC meeting.

Decision:

- Chris Sommers motioned to approve the June 14, 2018, TRC Meeting Summary. Ross Duggan seconded the motion. The motion for approval was carried by all present members.

Action Items:

- Finalize the June 14, 2018, TRC meeting summary and post to the website. (Nina Buzby, 9/28/18)
- Reschedule September 2019 TRC meeting. (Nina Buzby, 10/3/18)

3. Information: SC Meeting Summary from July 25, 2018

Phil Trowbridge summarized the July SC meeting and highlighted the efforts by the TRC and SC in approving funding for 2019 RMP special studies. Phil informed the Committee of the SC's acceptance of the TRC recommendations with the addition of \$80K of Undesignated Funds for two more proposals beyond what the TRC had prioritized. Phil also noted that the quantity of proposals this year was greater than usual, and the Multi-Year Planning Workshop should be used to give better direction on the number and type of proposals the committees want. The SC discussion also included an extended discussion of the 2018 Annual Meeting agenda.

4. Decision: S&T Monitoring Design for 2019, Including Plans for Laboratory Intercalibration Studies

Phil Trowbridge presented an overview of 2019 S&T budgets and a few RMP-related activities: USGS moored Sensor support, USGS monthly nutrient and phytoplankton cruises, the RMP water cruise, 2019 sport fish sampling, and intercalibration studies. The budget for water sampling was comparable to previous spending, and slightly under budget when compared to the Multi-Year Plan estimate. The sport fish budget estimate was \$24K above the Multi-Year Plan estimate due to add-on studies and extra planning needs. However, Phil proposed to reduce the budget for intercalibration studies to \$47K instead of \$69K to make up this difference.

Ian Wren introduced the topic of Jim Cloern's (USGS, monthly nutrient cruises) retirement in March 2019. With Cloern's main technician (Tara Schraga) also retiring, USGS will need to backfill both of those positions to keep the program going. A decision will be made within three months as to whether or not the program will continue and the RMP and NMS may need to assess if they can provide support for the staff replacement.

Phil presented the target analytes for both the water and sport fish sampling efforts, noting the removal of nutrient collection from the Golden Gate Bridge site and addition of fipronil to sport fish sampling. The TRC asked to be included on the invite to the Sport Fish Workgroup strategy meeting in the fall. Phil also mentioned the two add-on projects to sport fish efforts: archiving samples for analysis of microplastic and analysis of PCBs in shiner surfperch at Probability Based Monitoring sites.

Don Yee presented the selenium intercalibration (IC) study which consisted of two types of tissue sampling (clam and sturgeon) as well as water sampling. Paul Salop suggested adding Physis Environmental Laboratories as a third lab in the study and the TRC agreed. Don presented the topic of using fillets or muscle plugs to assess tissue concentrations, and the TRC moved to include fillets in the IC study. The TRC was supportive of the idea to move the location of the sturgeon fillets and plugs so that they were co-located on each sturgeon, but will defer to the Sport Fish WG to make the final decision. If there is a change to the location of the fillets, this change should be well documented. A boat will be needed to collect the water samples for the IC study. It was suggested to contact the Bureau of Reclamation and to piggy back on their monthly water quality cruise. Don Yee also briefly outlined the PCBs in sport fish tissue IC study that will compare AXYS results to results from the previously used lab, WPCL.

Phil Trowbridge presented a recommendation to reduce costs for short-term archives. Options included discarding sediment and bivalve samples older than 10 years as well as older sport fish tissue that does not have a designated sample location. The TRC wanted to know how volume translated to cost reduction, as well as the frequency at which the short-term archives were utilized by SFEI or outside researchers. The TRC decided to move forward with the proposed archive discards, but would like SFEI to look into whether any of the sediment archives from random sites should be retained.

Phil Trowbridge asked for input from the TRC on collecting and reporting samples on alkylated PAHs. Bridgette DeShields noted the use of PAHs for fingerprinting in a current application with San Francisco Waterfront work. TRC moved to continue alkylated PAH monitoring in sediment given this fingerprinting advantage and also to continue monitoring in bivalves given the low cost, frequency, and to mirror NOAA mussel watch reporting of alkylated PAHs.

Decisions:

- The TRC approved the budgets for 2019 Status and Trends monitoring efforts.
- The TRC approved adding sport fish fillets to the selenium IC study design.
- The TRC approved the discarding of short-term archives as proposed by staff.
- The TRC agreed to continue analyzing alkylated PAHs in both sediment and bivalves for the foreseeable future.

Action Items:

- Invite TRC to Sport Fish Workgroup meeting. (Jay Davis, 11/1/18)
- Reach out to Physis for participation in Selenium IC study and confirm MDLs and particulate feasibility. (Don Yee, 9/24/18)
- Look into feasibility of using the Bureau of Reclamation Water Quality Cruise for the Selenium IC study water sample collection. (Nina Buzby, 9/28/18)
- Inspect details in sediment PBM, short-term archives to determine whether they can be discarded. (Phil Trowbridge, 10/31/18)

5. Decision: Recommendation for 2017 Water Cruise Results for Copper

Don Yee summarized the dissolved copper method change by Brooks Analytical Laboratories. The new method resulted in 20-50% higher concentrations than in samples using reductive precipitation (RP) method. Moving forward the RMP will continue both RP and triple quad (QQQ) methods to accumulate several years of data for possible comparison down the line.

Decision:

- The TRC moved to continue both RP and QQQ methods for future copper monitoring.
- TRC agreed to only publish copper data from 2017 that was measured using the RP method.

Action Items:

- Share the results of the copper IC study with SCWRPP. (Don Yee, 12/14/18)

6. Decision: Judging Criteria and Process for Data Analysis Challenge

Cristina Grosso presented an overview of the Data Visualization challenge that was previously discussed by the TRC, including the challenge scope, scoring criteria, and the judging schedule. The mission of the challenge is to attract folks to the RMP dataset and increase traffic to the CD3 data tool. The TRC provided sources to aid in challenge distribution. Richard Looker proposed that we record how participants found out about the challenge.

The TRC also gave a number of comments on the challenge flyer. These suggestions included a decision to change the challenge's name as well as a more specific approach to eligibility requirements. Participants must use at least some data from the SF Bay and submit an "Interpretive Summary/Abstract" that is up to one page. The TRC approved the judging schedule and the use of a 1-5 point scoring system on 4 equally weighted criteria and one binary/eligibility requirement relating to project completion. Phil Trowbridge suggested scheduling time in a future TRC meeting (possibly after the judging at the December TRC Meeting) to discuss what was gained and/or learned from the challenge.

Decisions:

- The TRC renamed the challenge to the: San Francisco Bay Data Visualization Challenge, Sponsored by the Bay RMP.
- The TRC finalized eligibility requirements - 1 page abstract, data must come from CD3 and at least some aspect must relate to the SF Bay.

Action Items:

- Incorporate TRC suggestions to challenge flyer. (Cristina Grosso, 9/24/18)
- Send the challenge webpage to members of the TRC so they can circulate within their networks. (Cristina Grosso, 9/24/18)

- Announce challenge and disseminate amongst networks. (Cristina Grosso, 9/24/18)
- Score submissions prior to next TRC meeting and choose top 10 for presentation to the TRC. (Phil Trowbridge, Cristina Grosso, Nina Buzby, 12/7/18)
- Schedule time during the March TRC meeting to discuss lessons learned from challenge.(Phil Trowbridge, 3/1/19)

LUNCH

7. Discussion: RMP Communications Products and Agenda for Annual Meeting

Jay Davis previewed various communication materials including the RMP Update and an upcoming article in the Estuary News. The TRC also was shown the agenda for the Annual Meeting, which, after feedback from the SC, focused more on looking forward and giving an update on the programs. The only post-SC change to the agenda was the replacement of Richard Looker with Naomi Feger as one of the moderators. Jay Davis facilitated discussion on possible themes for the 2019 Pulse to present to the SC, which included: nutrients, sediment, and pathways. Ian Wren highlighted the theme of pathways allowing for assessment of the challenges and success stories. Richard Looker proposed the theme of fate & transport, focusing on specific case studies, which may be useful for a following Pulse (after a pathways Pulse). The greatest level of support was for a theme related to pathways or fate & transport. Suggested topics for this theme were: pharmaceuticals in wastewater, stormwater loadings, PCBs in dredged material, nutrient modeling, dioxin synthesis, mercury isotopes (Joel Blum), and post-fire monitoring results.

8. Information: Preview of Annual Meeting presentations

Don Yee and Ila Shimabuku gave preview presentations of talks that will happen at the 2018 Annual Meeting. Don spoke about the Dioxin Synthesis, while Ila spoke about recently-received bisphenol data. The TRC provided feedback on both presentations as follows:

Dioxin

- The TRC encouraged more explanation about the background and context of dioxins and to organize the talk around the questions relating to the dioxin mass balance framework.
- Chris Sommers posed concern towards the point of co-management of dioxins with PCBs given the different sources for these two contaminants. He encourage

messaging that acknowledges PCBs management may also inadvertently address dioxins as well, but not that management for PCB sources will also be effective against dioxin sources.

- Chris Sommers suggested being more explicit that the 10x greater atmospheric deposition estimate relates to deposition directly into the SF Bay, while local tributary input refers to runoff, contributions, or loads from local watersheds.
 - The TRC also wanted to know when the atmospheric deposition modeling was conducted, which was in 2012.
- The TRC recommended making the maps in the presentation have uniform scale bars, and consequent icon sizes, so that comparison between RMP and DMMO data is consistent.

Bisphenols

- In the initial background of the presentation add more information why bisphenols are commonly used (ie. plasticizer, flame retardant). However, in general the TRC suggested spending more time talking about the data and less time on the context.
- Chris Sommers advised against using language of “Hot Spot” when describing a location with high concentrations in water in the Bay.
- The TRC suggested writing out acronyms.
- Richard Looker and Phil Trowbridge suggested filling summary statistics table that included “0” median detection levels with “ND” (non-detect).
- The TRC made suggestions on a graph comparing detection levels with the BPA PNEC value:
 - Apply a label for the PNEC line that identifies the value as BPA-specific.
 - Shorten the PNEC line so that it only applies to BPA detection levels, and not those related to BPS.
- The TRC suggested greater contrast/differentiation in maps colors.

9. Information: Status of Deliverables and Action Items

Phil Trowbridge noted a large fraction of reports are in the 95% finalized range, and the recent finalization of four small tributaries and loadings reports.

10. Discussion: Plan agenda items for future meetings

The TRC confirmed that the Pulse outline, an informatics update (from Amy Franz and Cristina Grosso), a presentation of the 2019 Workplan, judging and discussion of the

data challenge, and a presentation by Karina Nielsen on the MapCO2 Buoy and Ocean Acidification should be included on the December 2018 meeting agenda.

11. Discussion: Plus/Delta

The TRC thanked staff for their efforts. Special thanks to Don Yee and Ila Shimabuku for pulling together their presentations in advance of the Annual Meeting. Chris Sommers and Richard Looker also noted the benefits of seeing the evolution of committee conversations through the copper monitoring and the data challenge work. There was also appreciation for seeing new faces in the room.

Adjourn



Bay RMP Multi Year Planning Workshop and Steering Committee Meeting
 October 24, 2018
 San Francisco Estuary Institute

Meeting Summary

Attendees

SC Member	Affiliation	Representing	Present
Eric Dunlavy	City of San Jose	POTW-Large	Yes
Leah Walker	City of Petaluma	POTW-Small	Yes
Karin North**	City of Palo Alto	POTW-Medium	Yes
Adam Olivieri	BASMAA / EOA, Inc.	Stormwater	Yes
John Coleman	Bay Planning Coalition	Dredgers	Yes
Craig Conner	US Army Corps of Engineers	USACE	
Tom Mumley*	SFB Regional Water Quality Control Board	Water Board	Yes
Naomi Feger	SFBRWQCB Alternate	Water Board	Yes
Maureen Dunn	Chevron	Refineries	Yes

* Chair, ** Vice Chair

TRC Member	Affiliation	Representing	Present
Luisa Valiela	USEPA	US-EPA IX	Yes
Richard Looker	SFBRWQCB	Water Board	Yes
Bridgette DeShields*	Integral Consulting	Refineries	Yes
Chris Sommers	BASMAA	Stormwater	Yes
Simret Yigzaw	City of San Jose	POTWs	Yes
Tom Hall	EOA, Inc.	POTWs	phone

* Chair

Guests and Staff

- Phil Trowbridge - SFEI
- Jay Davis - SFEI
- Ila Shimabuku - SFEI
- Nina Buzby - SFEI
- Leticia Grenier - SFEI
- Warner Chabot - SFEI
- Becky Sutton - SFEI
- Pat Walsh - SFEI
- Jing Wu - SFEI
- Scott Dusterhoff - SFEI
- Alicia Gilbreath - SFEI
- Jen Hunt - SFEI

Multi Year Planning Workshop

1. Introductions and Review Agenda

Tom Mumley welcomed participants, including new SC member Maureen Dunn who had taken over for Peter Carroll as the new representative for refineries. Peter Carroll intended to continue his participation on the Selenium Workgroup. Tom also allowed for introductions, and reviewed the multi-year planning workshop agenda.

2. Discussion: Anticipated management decisions and policies, and related information needs

Phil Trowbridge presented a table outlining anticipated management decisions and policies, and actions by regulatory agencies that manage Bay water quality. Phil highlighted specific items as high priorities warranting RMP attention, noting that the topics align well with the current direction of RMP Workgroups. Attendees made comments on additional topics for inclusion in the table and there was discussion surrounding outcomes of RMP work that related to broader policies and legislation.

When discussing topics related to wetlands, Chris Sommers, Luisa Valiela, and Naomi Feger noted the importance of the cross pollination of knowledge between the Wetland RMP and stormwater stakeholders and experts. The issue of recycled water and the relation to a reduction in flows was raised by Leah Walker, leading to the addition of another potential future driver to the table.

Action Items:

- Create a separate table in the 2019 Multi Year Plan outlining legislation/policies/decisions/outcomes that RMP efforts have contributed to (e.g., copper in brake pads, triclosan, PBDEs, and microbead ban). (Jay Davis, 1/16/19)

- Find a venue/meeting to bring up an agenda item to cross pollinate knowledge between stormwater folks and Wetland RMP. Next year, have the WRMP bring concrete tasks on how to continue this collaboration/integration into the future. (Luisa Valiela, 11/30/18)
- Make adjustments to the Decisions, Policies, and Actions table in the 2019 Multi Year Plan related to highlighted lines and add “Reduced wastewater and stormwater flows into the Bay” as a potential future driver. (Phil Trowbridge, 10/25/18)

3. Decision: Setting Planning Budgets for Workgroups

Phil Trowbridge gave a brief overview of the Multi-Year Plan and mentioned that Status and Trends monitoring and USGS support make up the largest portions of the RMP budget. Phil noted the possible loss of monthly USGS Bay Cruises, though maintained that contributing a similar amount of RMP funds to such work would be worthwhile. He presented both RMP costs and the balance of set-aside funds over a 10-year window, as well as the forecasted costs of special studies.

Phil Trowbridge and Jay Davis then presented the multi-year planning budgets for individual Workgroups - noting a new tactic meant to help establish budgets. Workgroups were prompted to delineate projects that were “must-do’s” and “should-do’s,” with the idea that must-do projects would likely be funded. For each Workgroup MYP table, Jay and Phil noted which projects were “must-do’s” and attendees discussed these prioritizations and associated budgets. With these specifications, workgroup “must-do” costs only exceeded available funds by 50% (as opposed to 100% last year).

The group discussed strategies to address the mismatch between funds and proposed costs. Chris Sommers proposed prompting Workgroups to develop full proposals that meet a target maximum value, and Tom Mumley suggested incorporating a 10% buffer to incite the development of new ideas meant for SEP funding. Given the large amount of effort by the TRC last year, these additional ideas would not require the creation of full proposals but rather, in attempts to have a more tiered level of effort, short informative paragraphs.

At the end of the discussion, Phil Trowbridge noted in previous years the presentation of Workgroup MYP tables at the Workshop did not generate much discussion. This year’s meeting shows improvement, and last year’s large effort to approve special studies will likely be reduced this year.

Action Items:

- Create additional pie charts showing breakdown of where costs are going, that include actual dollar amounts (as a new chart or in addition to existing percentages). Use an asterisk or note to help identify costs funded by external entities. (Nina Buzby, 12/31/18)
- Lower the priority of Sediment WG stream gage project from “must-do” to “should-do” (Phil Trowbridge, 10/25/18)

- Remove the Sediment WG modeling task and incorporate into SPLWG instead (Nina Buzby, 12/31/18)
- Flag “must-do” items that are part of multi-year studies (Nina Buzby, 12/31/18)
- Recalculate WG budgets and present SC updated table again at January meeting (Nina Buzby, 1/23/19)

4. Summary, Action Items, Adjourn Planning Session

Jay Davis motioned to recognize Phil Trowbridge for his exceptional contributions to the Bay RMP as Program Manager, as follows.

“The Steering Committee recognizes Phil Trowbridge for outstanding contributions to the RMP. Phil has set a new standard of excellence for the RMP Manager position. Under his leadership, the Program has grown and become stronger than ever, and has a solid foundation for continued success.”

The motion for approval was carried by all present members.

Other comments:

- “Meeting Hero” - Richard Looker
- “Synthesize and feed back ideas from group discussion” - Naomi Feger
- “Not just a technocrat or a bureaucrat, but the best of both” - Tom Mumley
- “Still benefit from you no matter where you are” - Karin North
- “The RMP family is a family, it’s not goodbye it’s see you soon” - Phil Trowbridge

Steering Committee Meeting

5. Introductions, Review Agenda and Confirm Chairs

Tom Mumley allowed again for introductions, and reviewed the afternoon agenda. SC Chair and Vice Chair positions were confirmed with special thanks from Phil Trowbridge to Tom Mumley and Karin North for their contributions and efforts over the past year.

Decision:

- Leah Walker motioned to confirm Tom Mumley and Karin North will continue in their roles and Steering Committee Chair and Vice Chair, respectively. Eric Dunlavey seconded the motion. The motion was carried by all present members.

6. Approve Meeting Summary from July 25, 2018 and confirm/set dates for future meetings.

There were no comments on the July SC meeting summary before approval. Leah Walker mentioned a conflict with the future January meeting date, but noted that Robert Wilson would attend in her place. Ila Shimabuku outlined conflicts with the October SC meeting relating to the State of the Estuary Conference and Microplastic Symposium and presented alternate date options. SC meetings were scheduled through October 2019.

Decision:

- Leah Walker motioned to approve the April 25 Steering Committee meeting summary. Eric Dunlavey seconded the motion. The motion for approval was carried by all present members.

Action Items:

- Reschedule October SC meeting for 10/30/19 (Ila Shimabuku, 10/31/18)

7. Information: TRC Meeting Summary

Phil Trowbridge summarized the September TRC meeting and its main focus: reviewing S&T monitoring design and budget, discussing future intercomparison studies, and finalization of copper results. Phil reminded the SC members of the ongoing Data Visualization Challenge that was first discussed at the TRC. Luisa Valiela invited SC members to attend the December TRC meeting since there will be a guest speaker: Karina Nielsen from SFSU speaking on ocean acidification.

8. Information: RMP Financial Update for 2018 Quarter 3

Phil Trowbridge commenced the RMP financial update by noting that Jen Hunt will be taking over his role related to RMP finances after his departure. He noted that to this point in the year less than 75% of the budgeted amount has been spent on special studies efforts, while greater than 75% has been spent on programmatic costs. The year should end on balance with no additional funds left over. Phil moved on to propose that the tasks from prior years (2015-2017) and their associated unencumbered amounts be transferred to undesignated funds.

Lastly, Phil presented the proposal to increase the amount of money in the Reserve from \$200,000 to \$400,000. There was discussion by the SC that this increase would require additional messaging. Most notably, communicating the definition and purpose of allocating money to the Reserve.

Decisions:

- Leah Walker motioned to approve the transfer of 2015-2017 unencumbrances as a surplus to undesignated funds. Karin North seconded the motion. The motion for approval was carried by all present members.
- Leah Walker motioned to approve an increase to the Reserve amount to \$400k (from \$200K) with a note defining the purpose and economic incentive to having a Reserve which are to be prepared for economic downturns that could affect RMP revenue. Karin North seconded the motion. The motion for approval was carried by all present members.

Action Items:

- Increase Reserve amount to \$400k. (Patrick Walsh, 12/05/18)
- Create language that defines and explains the incentive and purpose of increasing the Reserve amount (Jay Davis, 12/31/18)

9. Decision: Approve Undesignated Funds to Analyze Samples of Runoff from the North Bay Fires for Chemicals of Emerging Concern

Rebecca Sutton reiterated the findings Kevin Lunde recently presented on the non-target analysis (NTA) monitoring of the 2017 North Bay fires. She outlined the need for additional sample analysis relating to the Region 2 second flush samples and Region 1 first flush samples. The SC agreed that both additional tasks would provide helpful further detail to the current results as well as allow for interesting data comparison. In this request for \$22,000 of additional funding, Rebecca noted that the majority of the sum would go towards laboratories (\$20K) and a minor amount for SFEI labor (\$2K).

Decision:

- Leah Walker motioned to approve the additional funding to be taken from Undesignated Funds. John Coleman seconded the motion. The motion for approval was carried by all present members.

Out of Order Item: Circulation of 2018 RMP Annual Meeting Photos

Naomi Feger suggested that RMP staff look into options for sharing photos from the Annual Meeting and possibly the results of the meeting evaluation survey as well. Karin North suggested sharing the photos using the Shutterfly Platform, and mentioned the added benefit of improved photo organization.

Action Item:

- Look into options to make Annual Meeting photos accessible through the Annual Meeting website, or using a platform like Shutterfly. (Nina Buzby, 11/16/18)

10. Decision: Confirm Fees for 2020

Phil Trowbridge reminded the SC of the practice of planning fees in three-year increments to help ease planning efforts. He presented the existing numbers to the SC and noted that the agenda item was a confirmation of these values.

Decision:

- Tom Mumley motioned to confirm the fees for 2020 and both Adam Olivieri and Karin North seconded the motion. The motion for approval was carried by all present members.

11. Decision: Approve the 2019 Budget and Detailed Workplan

Phil Trowbridge presented an overview of the 2019 Detailed Workplan and Budget, noting the Program revenue and corresponding costs broken down into three categories: programmatic, status and trends, and special studies. Additionally he gave a brief outline of the status and trends design reviewed by the TRC in September, the special studies budget, and plans for interest and set-aside funds. Phil explained that the expected interest earned in 2019 could be deposited into Undesignated Funds, rather than included as revenue, to prevent guesswork in future budget planning.

Phil noted that last year's efforts to cut back on program management costs were effective, but approached the lowest limit necessary to run the Program and in the future this budget should be increased. In addition to this slight increase in program management costs, Phil also explained the higher costs associated with communications and data management relating respectively to the publication of The Pulse and the new task of DMMO database maintenance. He also pointed out the high cost of archiving samples.

Decision:

- Leah Walker motioned to approve the budget and Detailed Workplan. Tom Mumley seconded the motion. The motion for approval was carried by all present members.
- Leah Walker motioned to approve the transfer of \$60K earned in interest to Undesignated Funds. Tom Mumley seconded the motion. The motion for approval was carried by all present members.

Action Items:

- Reach out to Jan Thompson (USGS) to inquire about her retirement timeline and how this may affect the RMP. (Jay Davis, 11/30/18)

12. Decision: Select Theme for the 2019 Pulse Report and Discuss Upcoming Reports and Communication Products

Jay Davis began by presenting the results of the Annual Meeting evaluation survey, noting the high response rate and overall positive feedback. Jay mentioned the main point of improvement would be to better the balance of who attends the meeting (i.e., increase stormwater presence).

The SC shared additional comments commending the RMP on a successful meeting, and Karin North made the suggestion to charge a nominal fee (e.g., \$40) to non RMP-paying members to help with costs and minimize “no-show” attendees.

Jay Davis then presented a preliminary outline for the upcoming Pulse with a proposed theme of “Pollutant Pathways to the Bay.” The outline followed the pattern of providing a basic overview, important regulations, recent findings and present loads, as well as future challenges for each pathway. The SC was in support of this theme. Karin North and Tom Mumley discussed shortening or combining the proposed section on atmospheric deposition and Maureen Dunn asked for specifics on how the data on “present loads” would be sourced.

There was also discussion on how this topic would relate to the State of the Estuary Report planned for next year. Jay Davis and Luisa Valiela noted that there seemed to be crossover, and future coordination would be beneficial. Jay also noted the need for new graphics and infographics on pollutant pathways and asked the SC for suggestions to help in these efforts. Karin North suggested that good infographics would make the Pulse valuable for teachers and schools.

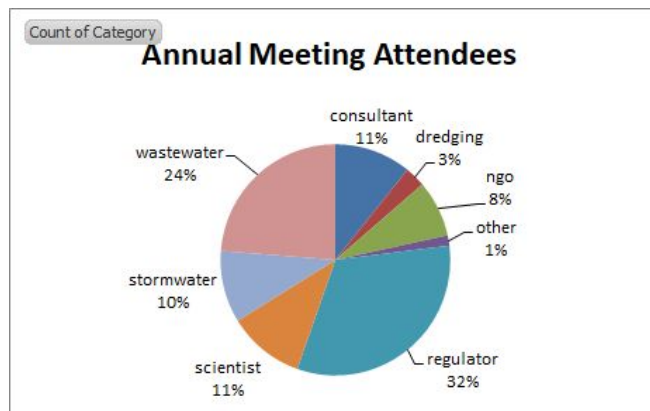
Finally, Jay Davis asked the SC for suggested topics for the December Estuary News article. He mentioned in past years CECs have been covered in December, and Rebecca Sutton suggested covering pharmaceuticals given the recent report release and SB212 legislation. Jay also relayed that Estuary News also suggested adding a Q&A with Phil Trowbridge to the article.

Decision:

- The SC approved the proposed Pulse theme.

Action Items:

- Make new pie chart of Annual Meeting attendees based on the registration list, not just survey responses. (Nina Buzby, 11/19/18)



- Coordinate Pulse and State of the Estuary Reports. (Jay Davis and Luisa Valiela, 07/01/19)
- Look into sources, pathways, loadings data and confer with the TRC and SC. (Jay Davis, 06/01/19)
- Send out East Bay Express EBMUD article to SC members. (Jay Davis, 10/25/18)
- Reach out to Robert Wilson for Pulse education graphics. (Leah Walker, 11/2/18)
- For the Science Update at the January SC meeting, consult with Becky regarding the possibility of a CEC item, then run it past Tom and Karin. (Jay Davis, January 15)

13. Discussion: Status of RMP Deliverables and Action Items

Phil Trowbridge presented the stoplight report and gave an update on RMP action items and deliverables. He noted the delay in a few reports related to extenuating hurricane delays, late lab results, long external review periods, and backlogged RMP staff efforts.

Phil also explained the plan for delegating deliverable management to Ila Shimabuku in his absence.

Jay Davis noted the upcoming Sport Fish Strategy meeting scheduled for November 14th and encouraged the attendance of any SC members who had interest.

Action Items:

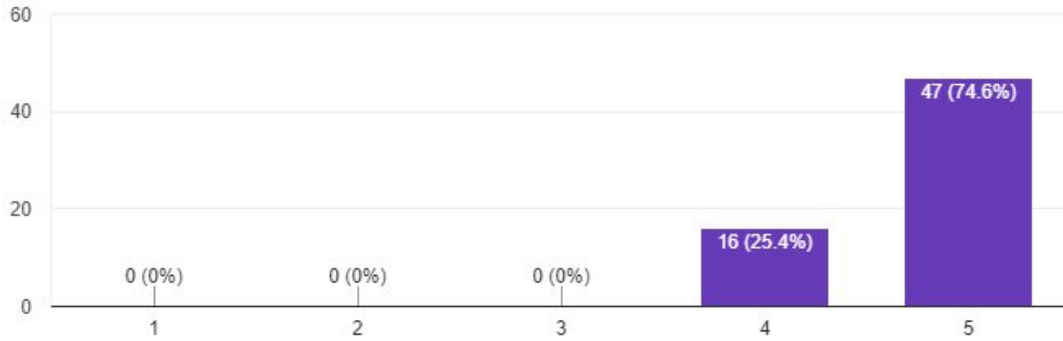
- Contact Brian and Beth with LTMS to finish review of the sediment bioaccumulation evaluation report. (Luisa Valiela, 10/26/18)
- Change due date of Steinberger Slough report to January 2019. (Ila Shimabuku, 10/31/18)
- Send out the Sport Fish Strategy meeting invitation. (Jay Davis, 10/26/18)

Adjourn

2018 Annual Meeting Evaluation Survey Results

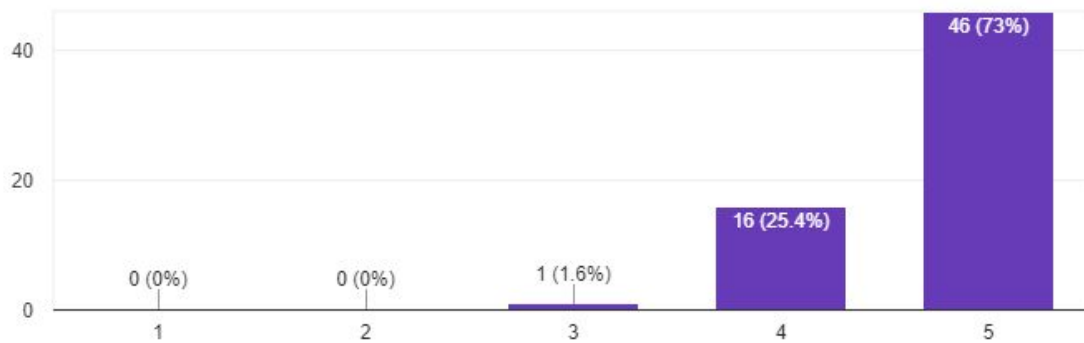
What was your general level of satisfaction with the meeting?

63 responses



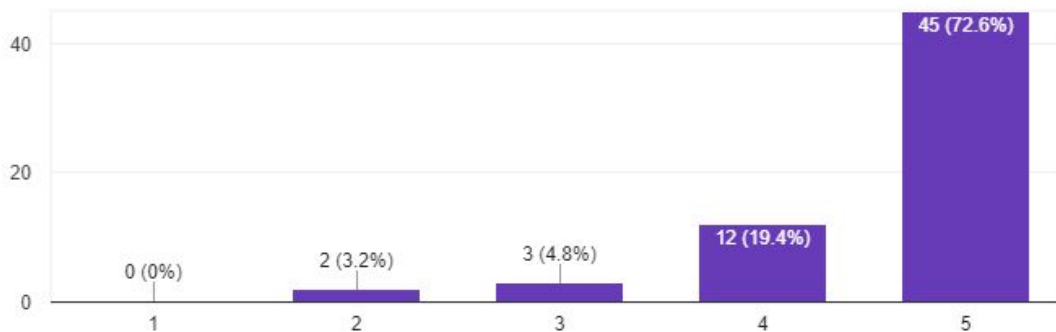
How was the general organization of the meeting?

63 responses

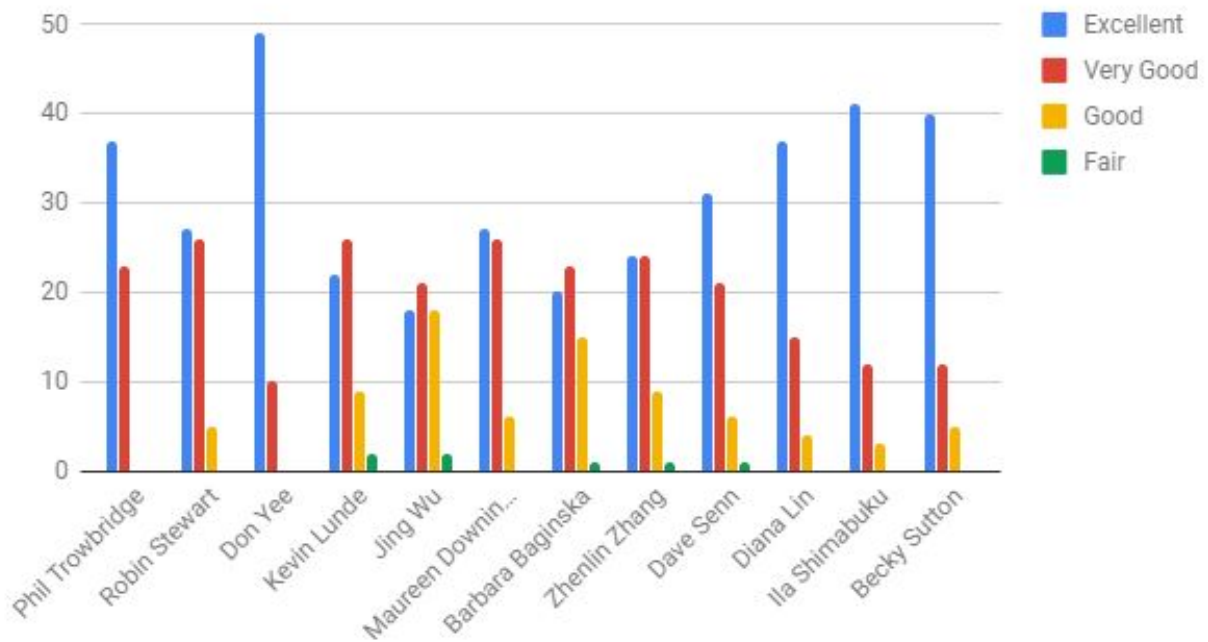


Was the David Brower Center a good location for the RMP Annual Meeting?

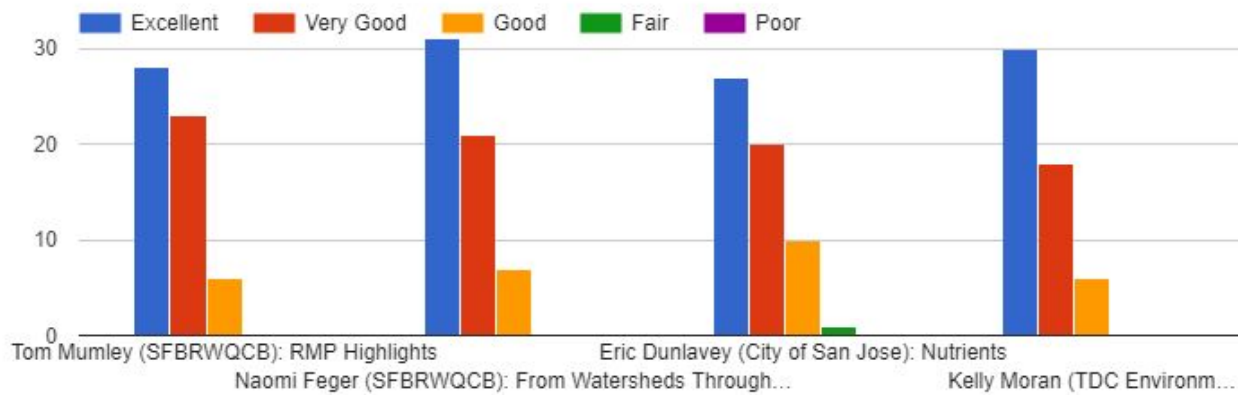
62 responses



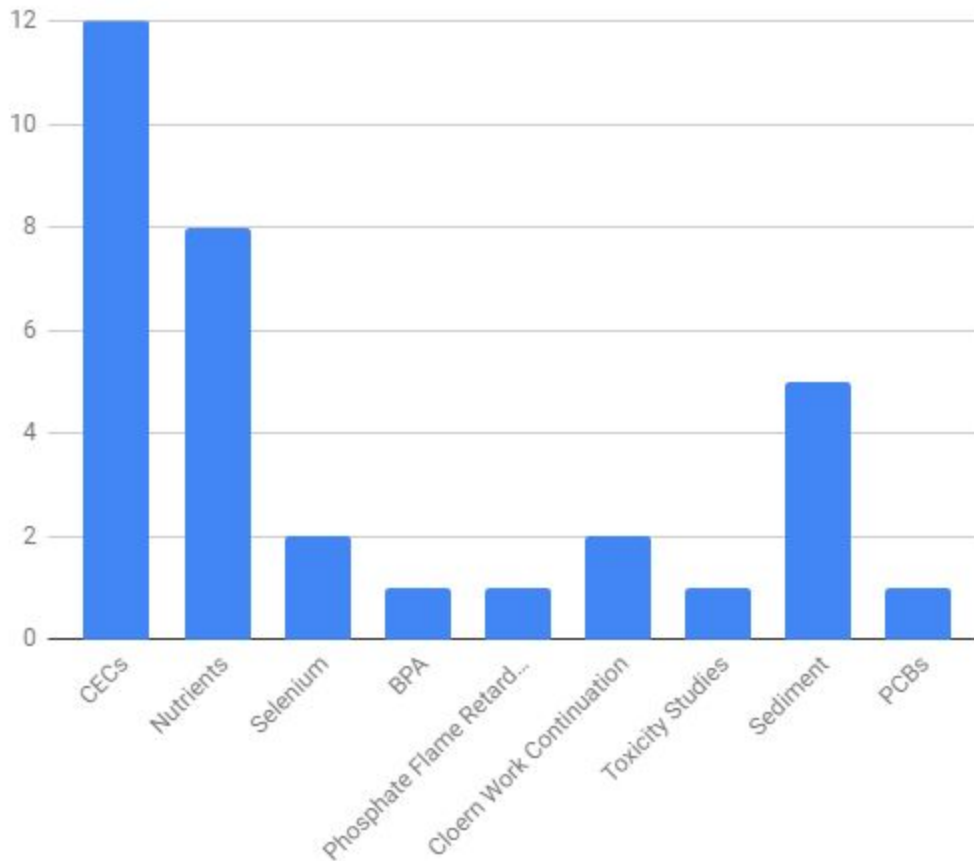
Please rate this year's speakers



Please rate this year's moderators



Which types of studies would you like to see prioritized in coming years?



- “refine predictive models for recovery/improvement of the Bay”
- “more on nutrient effects on DO & phytoplankton toxic blooms”
- “SF Bay Fish species, populations and abundances; SF Bay New Invasive Species types and abundances (Where's Andy); SF Bay Recreation Hotspots: Fishing, Swimming, Wind Surfing, Kayaking, Beaches Survey”
- “How to better integrate the various monitoring programs going on - from project-based, to compliance, to operational monitoring that all address multiple stressors on the ecosystem. While the RMP does an excellent job in addressing nutrient and contaminant issues, it could become much more integrated into a more comprehensive program that synthesizes the cumulative benefits of restoration, remediation, antidegradation, endangered species recovery, climate change modeling to regional anticipate adaptation options, etc.”
- “revisit issue of passive samplers (esp. with re: to potential use during wet season)”

Additional Comments:

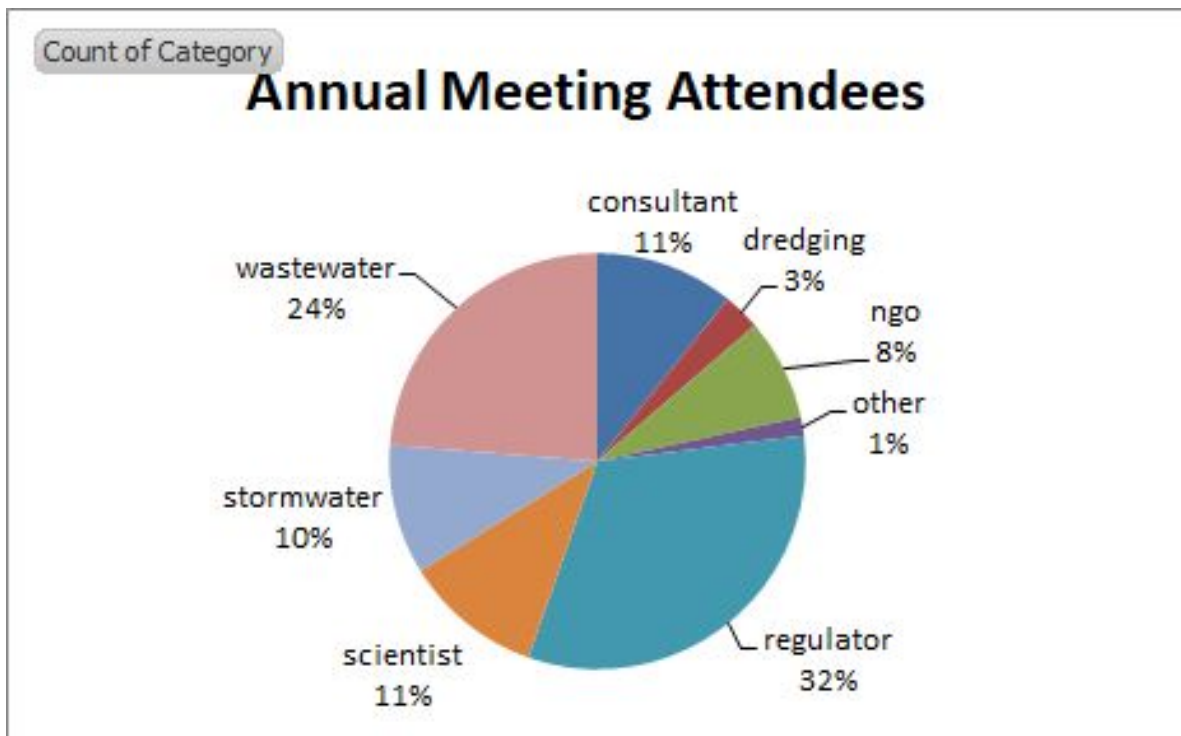
- “News of the loss of federal funding for basic science and monitoring is alarming. I am hoping that the value of consistent long-term monitoring records will be much discussed in the coming year”

- “Perhaps include an overview presentation on the entire RMP program with some sort of assessment on the relative importance/risks associated with different pollutants (i.e. similar to the risk levels associated with emerging contaminants).”
- “would love to see a talk (have invited guest speaker?) that focuses on comparing our estuary data to another west coast estuary based on available data- multiple parameters”
- “I am aware of your work on stormwater, however it was not showcased at this meeting. Include more next year?”

Highlights!

- *“How can you improve on perfection?”*
- *“Perhaps the best I've attended, and I don't think I've missed one.”*
- *“Thank you for another wonderful RMP!”*

Which of the following categories best describes your affiliation?



Proposed Theme and Preliminary Outline for 2019 Pulse

Theme: Pollutant Pathways to the Bay

Introduction

- Definitions: sources, pathways, loadings
- Overall illustration

Municipal Wastewater

- Pathway 101
 - Basic description with illustration
- Important Regulations
 - Current
 - Future
- Recent Findings
 - Present loads and long-term trends
 - Flow
 - Nutrients
 - Emerging Contaminants
 - Pharmaceuticals
 - Pesticides
 - Copper – long-term reductions in spite of population growth
 - Mercury
 - Selenium
 - PCBs
- Future Work and Challenges
 - Ethoxylated surfactants
 - ROC

Stormwater

- Pathway 101
 - Basic description with illustration
- Important Regulations
 - Current
 - Future
- Recent Findings
 - Present loads and long-term trends
 - PCBs
 - STLS trend study
 - Mercury
 - Emerging Contaminants
 - Copper
 - Nutrients
 - Selenium
 - North Bay fire studies

- Water Board
- USGS
- RMP NTA
- Future Work and Challenges
 - Stormwater CEC study
 - PMU studies

Industrial Wastewater

- Pathway 101
 - Basic description with illustration
- Important Regulations
 - Current
 - Future
- Recent Findings
 - Present loads and long-term trends for pollutants of concern
 - Selenium
 - Others?
- Future Work and Challenges
 - xx

Dredged Material Disposal

- Pathway 101
 - Basic description with illustration
- Important Regulations
 - Current
 - Future
- Recent Findings
 - DMMO PCB synthesis
 - TRV Study
- Future Challenges
 - xx

Central Valley

- Pathway 101
 - Basic description with illustration
- Important Regulations
 - Current
 - Future
- Recent Findings
 - Selenium: Tetra Tech modeling
- Future Challenges
 - xx

Atmospheric Deposition

- Pathway 101
 - Basic description with illustration
- Important Regulations
 - Current
 - Future
- Recent Findings
 - Present loads and long-term trends for pollutants of concern
 - Mercury – Joel Blum info
 - Dioxins – updated estimate from Dioxin Synthesis
- Future Challenges
 - xx

RMP Data Visualization Challenge Submissions

1. Akshar Ramkumar - Nueva School (High School Student)

<http://nbviewer.jupyter.org/github/aksramk/SFBayDataVisualizationChallenge/blob/master/dataAnalysis.ipynb>

pH in the bay

To understand the effects of pH in the bay, and to gain familiarity with the data, I started off by finding the correlation between the year and the acidity. Although over the years, the acidity has increased, it was by a minimal amount, and finding and analyzing the most acidic areas is most important. I plotted the data in a bar graph using the locations provided in the data, and found that Los Angeles was the most acidic location, on average. However, I thought that plotting the data based on precise values, like longitude and latitude values, might be more helpful. To do this, I plotted the data using plotly and basemap (separately), giving each data point its year and pH values. This map can be found above, along with the bar graph. The datapoints are coloured based on their values. Almost all of the values are basic, as they should be in the bay. The only acidic values are all around southeast Alameda, and the measurements are relatively recent, in 2015. If there was any area that should be flagged for concern in terms of acidity, it should be Alameda.

Mercury in the bay

Next, to understand, Mercury, I found the correlation between the year and the acidity. Similarly to pH, the concentrations have risen slightly over the years, yet none of the values seemed to be cause for concern. I graphed the data with plotly, after converting units to micrograms/liter and is available above. An unsafe amount of mercury in water is classified as 2 micrograms/liter, and none of the mercury measurements came close to this level. However, the San Joaquin River had consistently high measurements of mercury, at about 0.1 ug/L. There have also been articles concerning contaminated fish around these areas, flagging them for concern. These data points, however, were almost a decade ago, so may have changed in recent years, possibly for the worse. <https://www.ncbi.nlm.nih.gov/pubmed/20176346>

Pesticides in the bay

In order to get more insight into the bay as a whole, I searched up a list of concerning pesticides in the bay area at biologicaldiversity.org (bit.ly/2FVTUPj). Then, I identified all of these pesticides that were in the dataset: 42. Above, there is a cell which, when run, allows you to select a portion of the pesticides to look at. After selecting, it will display of map of all of these pesticides, the year their measurements were collected, and their concentration. I took 3 especially bad pesticides in the current results, and graphed them above. They can be found in this link (<http://bit.ly/2E0trOf>). Each of these three, bad pesticides showed up multiple times on the map:

Atrazine

According to the link above, "A popular herbicide called atrazine is the pesticide most commonly found in American drinking water. The European Union banned it in 2004 but the EPA re-evaluated and OK'd atrazine use in 2009. While it breaks down quickly in soil, it tends to hang around in water. Almost 90 percent of drinking water in the U.S. has atrazine in it, according to an analysis of U.S. Department of Agriculture data by the Pesticide Action Network. The weed killer messes with hormones, affects the immune system and is linked to birth defects." It is very harmful

There is quite a little bit of atrazine throughout the bay, about 10 measurements of it. These measurements are from about 10 years ago, so the problem could have gotten worse or better over the years. The amounts reach a high of .5 ug per liter, with the unsafe levels being around 3 ppb, or 3 ug/L. This is relatively low, but there are studies that show that even small amounts can affect hormones significantly.

Paraquat

"Paraquat, a pesticide linked to Parkinson's disease, is banned in China and the European Union but not the U.S. It's highly toxic and kills weeds on contact. A 2009 UCLA study found that a person exposed to paraquat and two other pesticides is three times as likely to develop Parkinson's disease. Paraquat also can cause kidney damage and difficulty breathing."

There are about 10 data points for Paraquat in the data, with a maximum concentration of 1.5 ug/L.

Glyphosate

"Scientists suspect [glyphosate] may be the culprit in widespread kidney disease among agricultural workers in Sri Lanka, India and Central America. It's the best-selling herbicide in the world, according to the Ag Journal. And it was the most heavily used pesticide in the U.S. in 2007, according to the most recent numbers available from the EPA." The Environmental Working Group's health recommendation is a maximum of 5 ppb, or 5 ug/L. However, the maximum values from the measurements are 20 ug/L. This makes sense, because the actual EPA maximum contaminant level is 700 ug/L, even though these levels are much greater than more health ones. The dates for the high glyphosate measurements are 5-10 years ago.

I didn't have time to research the other pesticides, but feel free to utilize the mechanism to look at some of the other important, harmful chemicals.

Conclusion

Overall, these conclusions are important to understanding the safety of Bay Area waters, and these tools allow for further investigation. Thanks for reading!

2. Wei Lu - GHD

https://transbig.shinyapps.io/SF_Water_Quality_Data_Visualization_Competition/

Associated Video File

In response to San Francisco Bay Data Visualization Challenge invitation, we have developed a Web Application to analyze and visualize the vast amount of historical water quality measurements in San Francisco Bay area for public and researchers to study the data in a user-friendly and interactive way, to get insights hidden in the data, and to unleash the big potential value from this big dataset. The Web Application is developed with R programming language and deployed onto R Cloud Server, which can be run from any device on any OS with internet connection without the need of installing any software locally. The Web application provides interactive data exploring and visualization with synchronized map and violin graph, in which the map shows the locations of the measurement and the values of the measurement results in color coded circles and the violin graph can not only show summary statistics such as mean/median and interquartile ranges as in a box graph but also shows the full distribution of the data allowing users to have a deeper understanding of the data.

Main features of the Web Application include:

- Remarkable Speed – Use next-generation dataset technology to search, filter, drill, and explore millions of rows of data quickly with no performance drag.
- Responsive Design – Analyse data and access results on desktop or mobile devices with ease.
- Interactive data exploring and visualization with synchronized map and violin graph.
- Animation view of synchronized map and violin graph through all years with historical measurements

With the Web Application, You can:

- Get deeper understanding of historical status of water quality in to SF Bay area.
- Improve data analytics efficiency and enable fast decision making.
- Have the power and flexibility of cloud-computing without the need of dedicated infrastructure

3. Walter Yu - Senior TE, Office of Stormwater Program Implementation, Division of Environmental Analysis, DOT CA

<https://github.com/walteryu/sfei-rmp>

<https://gallery.azure.ai/Experiment/SFEI-RMP-Classification-Evaluation-Chlorophyll-A>

<https://gallery.azure.ai/Experiment/SFEI-RMP-Classification-Evaluation-Dissolved-Oxygen>

Associated PDF

Nutrients present in the SF Bay are linked to higher algae blooms and toxins which result in lower dissolved oxygen (DO), negative impacts to fish habitat and lower the overall water quality. This topic was covered as a feature article in the 2017 Pulse of the Bay¹ which included data analysis of SF Bay monitoring results; as a result, this study continues such analysis with machine learning to identify other potential insights from monitoring data.

This study outlines the data, methods and results used to identify trends in the SF Estuary Institute (SFEI) Regional Monitoring Program (RMP) water quality and toxicity monitoring results from the Contaminant Data Display and Download (CD3) database². Specifically, it seeks to answer the following questions:

1. Which data attributes most influence DO, chlorophyll-a (Chl-a), ammonium (as N) and ammonia (as NH³) levels?
2. Does identifying these attributes lead to insights regarding possible causes for increasing nutrients?
3. What are some next steps and recommendations from this study?

This study analyzes the DO, chlorophyll-a (Chl-a), ammonium (as N) and ammonia (as NH³) from the CD3 dataset. Specifically, monitoring results were analyzed to identify potential insights.

The tools and process listed below were used to analyze data and provide recommendations:

- Jupyter Notebook - Exploratory data cleaning and analysis were completed using this notebook.
- Python Modules - The modules listed below will need to be installed in order to run this notebook.
 - Pandas, NumPy, SciPy, Seaborn, Matplotlib, Scikit-Learn
- Microsoft Azure Machine Learning (ML) Studio - ML Studio was used to calculate and compare ML models.

4. Kaveh Karimi Asli - Software engineer, Conservation Biology Institute & Froggi VanRiper - Oregon State University (Student)

https://ka7eh.github.io/sfei_rmp_2018/

https://github.com/ka7eh/sfei_rmp_2018

Associated PDF

Mercury in water and in fish tissues

This tool shows two data measurements in relation to one another: Mercury content of water samples, and average organic mercury content found in the tissues of four common fish species in the San Francisco Bay area. The data spans the years from 1994 to 2017. Purple dots on the map of San Francisco represent individual water samples tested in a given year. The darker the dot, the higher the mercury content of the sample. You can click on any individual dot to view

the exact measurement. The chart inset in the lower left shows the range of organic mercury levels found in each fish species during that year, represented on top of a gradient of safety thresholds for consuming those fish. To look at the data for a single year, the year of interest can be selected using control buttons in the left side panel. The “play” button will auto-play the annual data sequentially.

Interpretation and context

The four thresholds represented behind the fish data are set by the U.S. FDA, and represent danger levels for pregnant mothers who might eat fish. Measurements in the lowest (yellow) range indicate that the fish are safe to eat up to three times a week. The second range indicates that they are safe to eat up to two times per week. Fish in the third range should not be eaten more than once per week, and anything in the high (red) range is unsafe to eat in any quantity.

Humans are generally able to select alternative foods when certain options are unsafe. In fact, local governments issue advisories when they determine that residents should avoid locally-caught fish. Wildlife living on a fish diet in the San Francisco Bay area, however, do not have alternative food options. If their primary food source contains unsafe mercury levels, it can negatively affect entire generations of offspring, weakening the local ecological fabric. In November 2007, the California State Water Resources Control Board and the U.S. EPA approved a mercury mitigation plan for the Bay Area watershed. The following year the State began large-scale efforts to remove mercury from contaminated sites and to impose limits on the release of mercury from industrial and municipal wastewater systems. Even with these initiatives, it will take at least 70 years before the Bay Area watershed returns to safe mercury levels.

5. Sydney Sukuta - Brewmetrix

<https://www.dropbox.com/sh/r8kqd2vro81u1q6/AABka0czve9W09sGYPhj09yda?dl=0&preview=Cal+Sample+Water+Data+Report+11-30-18.pptx#>

Objective: The objective of this study is to condense huge environmental quality data sets spanning nearly 25 years, from 1993 to 2018, taken in the Northern California into easy understand output. We particularly focused on sample water in the short study.

Method Used: We used Factor Analysis methods whereby the multidimensional data sets ((cd3.sfei.org)) provided were mathematically reduced to a low dimension space for analyses.

Results Obtained: we were able to ascertain pollutant variable ranges, comparative regional pollutant profiling, and regional pollutant profile similarities over this 25-year period with clarity.

Conclusion: This study has demonstrated that Factor Analysis methods have the capability to extract useful information in large multidimensional data sets.

Recommendations: All stations should...

- Use the same analytes variable units, for example Velocity is reported in both ft/s and m/s, Turbidity in NTUs and mg/l, etc... in the data provided
- Report their region and counties to make the data emendable for geocentric analyzes, otherwise the data will be discarded in such work
- Report measurements for all tests e.g. Region 5 has no pH data reported for sample water, and in regions reported it's not reported by all the stations. Use for partial data in computations could lead to the wrong conclusions.
- Discard default entries e.g. where measurement depth is not recorded, -88 m seems to be reported as a default depth for at least sample water. If these default numbers are entered in computations this could output meaningless results.

Mercury in the San Francisco Bay

SFEI San Francisco Bay Data Visualization Challenge 2018

Mercury in water and in fish tissues

This tool shows two data measurements in relation to one another: Mercury content of water samples, and average organic mercury content found in the tissues of four common fish species in the San Francisco Bay area. The data spans the years from 1994 to 2017.

Purple dots on the map of San Francisco represent individual water samples tested in a given year. The darker the dot, the higher the mercury content of the sample. You can click on any individual dot to view the exact measurement.

The chart inset in the lower left shows the range of organic mercury levels found in each fish species during that year, represented on top of a gradient of safety thresholds for consuming those fish.

Navigating the tool

[Mercury in the San Francisco Bay](https://ka7eh.github.io/sfei_rmp_2018/) (https://ka7eh.github.io/sfei_rmp_2018/)

To look at the data for a single year, the year of interest can be selected using control buttons in the left side panel. The “play” button will auto-play the annual data sequentially.

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In November 2007, the California State Water Resources Control Board and the U.S. EPA approved a mercury mitigation plan for the Bay Area watershed. The following year the State began large-scale efforts to remove mercury from contaminated sites and to impose limits on the release of mercury from industrial and municipal wastewater systems. Even with these initiatives, it will take at least 70 years before the Bay Area watershed returns to safe mercury levels.

Created by [Kaveh Karimi Asli](#) and [Froggi VanRiper](#)

The code and processed data for this visualization is available at https://github.com/ka7eh/sfei_rmp_2018



2018 SFEI RMP Data Visualization Challenge

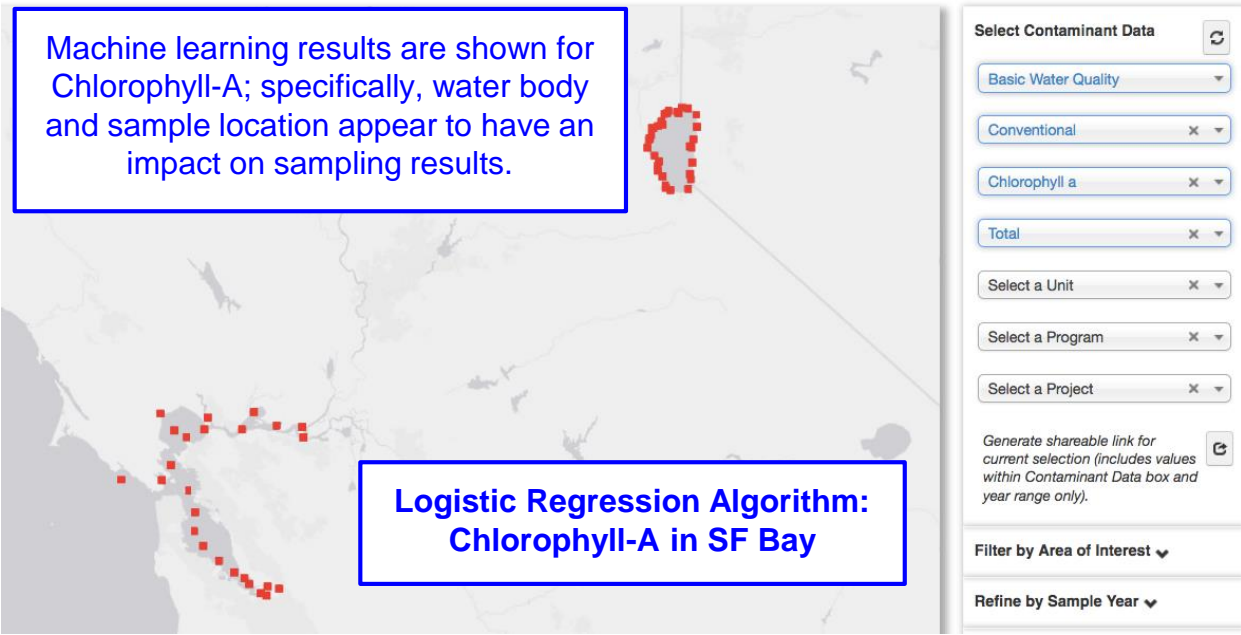
Machine Learning Analysis of Nutrients in the SF Bay

Author: Walter Yu



Nutrients present in the SF Bay are linked to higher algae blooms and toxins which result in lower dissolved oxygen (DO), negative impacts to fish habitat and lower overall water quality; as a result, machine learning was used to identify other potential insights from nutrient monitoring data.

Machine learning results are shown for Chlorophyll-A; specifically, water body and sample location appear to have an impact on sampling results.



**Logistic Regression Algorithm:
Chlorophyll-A in SF Bay**

Select Contaminant Data

Basic Water Quality

Conventional

Chlorophyll a

Total

Select a Unit

Select a Program

Select a Project

Generate shareable link for current selection (includes values within Contaminant Data box and year range only).

Filter by Area of Interest

Refine by Sample Year

Feature	Score
huc8_name	0.208333
stationname	0.041667
county_name	0.020833
result	0
huc10_name	-0.020833
huc12_name	-0.041667

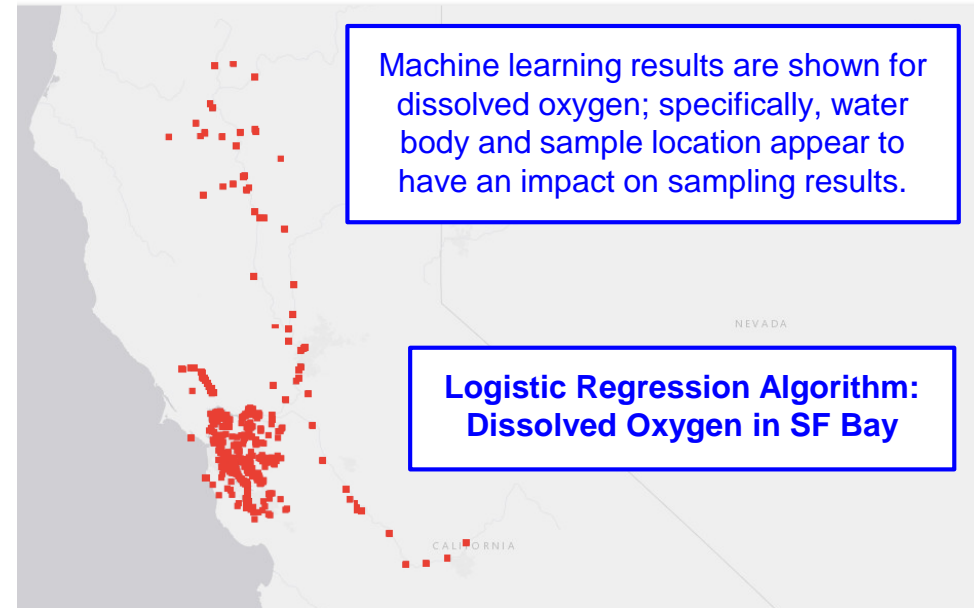
Metrics

Overall accuracy	0.564885
Average accuracy	0.825954
Micro-averaged precision	0.564885
Macro-averaged precision	NaN
Micro-averaged recall	0.564885
Macro-averaged recall	0.262879

Metrics

Overall accuracy	0.782918
Average accuracy	0.891459
Micro-averaged precision	0.782918
Macro-averaged precision	NaN
Micro-averaged recall	0.782918
Macro-averaged recall	0.413686

Feature	Score
result	0.086022
huc8_name	0.026882
huc12_name	0.010753
huc10_name	0.005376
stationname	0
county_name	0



Machine learning results are shown for dissolved oxygen; specifically, water body and sample location appear to have an impact on sampling results.

**Logistic Regression Algorithm:
Dissolved Oxygen in SF Bay**

Select Contaminant Data

Basic Water Quality

Conventional

Oxygen, Dissolved

Total

Select a Unit

Select a Program

Select a Project

Generate shareable link for current selection (includes values within Contaminant Data box and year range only).

Filter by Area of Interest

Refine by Sample Year

Download Mapped Data

Bay RMP Action Items

Key to Status Colors:

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.

Primary	Deliverable	Assigned To	Due Date	Status	Comments	Meeting Date	Complete
STLS Action Items from 11/8/18	Bonnie DeBerry and Lucile Paquette to send comments on October meeting summary and re-agendize meeting summary approval.	Bonnie DeBerry and Lucile Paquette	11/20/18			11/08/18	<input type="checkbox"/>
STLS Action Items from 11/8/18	RMP staff will check in with internal staff about the needs and process and come back to the next STLS meeting with some ideas. There could also be some procedures developed on how to formalize how workgroups work together.	jingw@sfei.org	12/06/18			11/08/18	<input type="checkbox"/>
STLS Action Items from 11/8/18	STLS to provide review comments by December 6, 2018 and then at the December meeting can discuss next steps.	STLS	12/06/18			11/08/18	<input type="checkbox"/>
STLS Action Items from 11/8/18	Richard Looker will send through his comments to the STLS when they are finished.	Richard Looker	11/09/18			11/08/18	<input type="checkbox"/>
STLS Action Items from 11/8/18	Jing will upload the comments submitted to date to the Google Drive meeting folder.	jingw@sfei.org	11/09/18			11/08/18	<input type="checkbox"/>
STLS Action Items from 11/8/18	We will collate and respond to the comments provided prior to the December 13th.	lester@sfei.org	12/12/18			11/08/18	<input type="checkbox"/>
Steering Committee Action Items from 10/24/18	Create a separate table outlining legislation/policies/decisions/outcomes that RMP efforts have contributed to	Jay Davis	11/30/18			10/24/18	<input type="checkbox"/>
Steering Committee Action Items from 10/24/18	Find a venue/meeting to bring up an agenda item to cross pollinate knowledge between stormwater folks and Wetland RMP	Luisa Valiela	11/30/18			10/24/18	<input type="checkbox"/>
Steering Committee Action Items from 10/24/20	Make adjustments to table related to highlighted lines and add "Reduced wastewater and stormwater inputs into the Bay" as a potential future driver.	Philip Trowbridge	10/25/18	Complete		10/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 10/24/18	Create additional pie charts showing breakdown of where costs are going, that include actual dollar amounts (as a new chart or in addition to existing percentages). Use an asterisk or note to help identify costs funded by external entities.	Philip Trowbridge	10/25/18			10/24/18	<input type="checkbox"/>
Steering Committee Action Items from 10/24/22	Lower the priority of Sediment WG stream gage project from "must-do" to "should-do"	Philip Trowbridge	10/25/18	Complete		10/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 10/24/23	Remove Sediment WG modeling task and incorporate into SPLWG instead	Philip Trowbridge	10/25/18	Complete		10/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 10/24/18	Flag "must-do" items that are continuations of multi-year studies	Jay Davis	12/31/18			10/24/18	<input type="checkbox"/>
Steering Committee Action Items from 10/24/18	Recalculate WG budgets and present SC updated table again at January meeting	Jay Davis	01/23/19			10/24/18	<input type="checkbox"/>
Steering Committee Action Items from 10/24/26	Reschedule October SC meeting for 10/30/19	Ila Shimabuku	10/31/18	Complete		10/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 10/24/18	Increase reserve amount to \$400k	patrickw@sfei.org	12/31/18			10/24/18	<input type="checkbox"/>
Steering Committee Action Items from 10/24/18	Create language that defines and explains the incentive and purpose of increasing reserve amounts	Jay Davis	12/31/18			10/24/18	<input type="checkbox"/>
Steering Committee Action Items from 10/24/18	Look into options to make Annual Meeting photos accessible by possibly uploading them to the Annual Meeting website, or using a platform like Shutterfly.	ninab@sfei.org	11/30/18	Complete		10/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 10/24/18	Reach out to Jan Thompson (USGS) to enquire about her retirement timeline and how this may affect the RMP.	Jay Davis	11/30/18			10/24/18	<input type="checkbox"/>
Steering Committee Action Items from 10/24/31	Make new pie chart of Annual Meeting attendees based on registration list, not just survey responses	ninab@sfei.org	11/19/18	Complete		10/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 10/24/18	Coordinate Pulse and State of the Estuary Report efforts	Jay Davis	06/01/19			10/24/18	<input type="checkbox"/>





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Primary	Deliverable	Assigned To	Due Date	Status	Comments	Meeting Date	Complete
Steering Committee Action Items from 10/24/18	Look into sourcing pathway loading data and confer with the TRC and SC	Jay Davis	06/01/19			10/24/18	<input type="checkbox"/>
Steering Committee Action Items from 10/24/34	send out East Bay Express EBMUD article to SC members	Jay Davis	10/25/18	Complete		10/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 10/24/18	Reach out to Robert Walker for Pulse education graphics.	Leah Walker	11/02/18			10/24/18	<input type="checkbox"/>
Steering Committee Action Items from 10/24/18	Contact Brian and Beth with LTMS to finish review of the sediment bioaccumulation evaluation report	Luisa Valiela	10/26/18	Complete		10/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 10/24/37	Change due date of Steinberger Slough report to January 2019	Ila Shimabuku	10/31/18	Complete		10/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 10/24/38	Send out Sport Fish Strategy Meeting invite	Jay Davis	10/25/18	Complete		10/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 10/24/18	Come up with more possible topics for science update, coordinate with RMP staff, and present to Tom Mumley and Karin North	Jay Davis	12/31/18			10/24/18	<input type="checkbox"/>
STLS Action Items from 10/4/18	Check with Phil on how to incorporate projected SEP funding in the MYP	Jennifer Hunt	10/18/18	Complete		10/04/18	<input checked="" type="checkbox"/>
STLS Action Items from 10/4/18	Agendize a more detailed discussion on the 2020 and 2021 MYP budgets in order to be prepared for the May SPL	Jing Wu	02/28/19			10/04/18	<input type="checkbox"/>
Technical Review Committee Action Items from 9/19/18	Finalize 06/14/18 TRC meeting summary and post to website	Nina Buzby	09/28/18	Complete		09/19/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 9/19/18	Use doodle poll to reschedule September 2019 TRC meeting	Nina Buzby	10/31/18	Complete	Doodle poll sent but awaiting responses.	09/19/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 9/19/18	Invite TRC to the Sport Fish Workgroup meeting	Jay Davis	10/01/18	Complete		09/19/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 9/19/18	Reach out to Physis for participation in Selenium IC study (confirm MDLs and particulate capabilities)	Don Yee	09/24/18	Complete		09/19/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 9/19/18	Look into feasibility of using Bureau of Reclamation Water Quality Cruise for Selenium IC study water sample collection	Nina Buzby	09/28/18	Complete		09/19/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 9/19/18	Inspect details in sediment PBM, short-term archives to determine whether they can be discarded	Philip Trowbridge	10/31/18	Complete		09/19/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 9/19/18	Share results of copper IC study with SCWRPP	Don Yee	12/14/18	Complete	Emailed Ken Schiff & Bowen Du about Cu issues 9/30. They indicated only having ever done water metals ICs in stormwater. Suggested trying Physis (also mentioned by AMS). Will include Physis in future ICs.	09/19/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 9/19/18	Incorporate TRC suggestions to challenge flyer	Cristina Grosso	09/24/18	Complete		09/19/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 9/19/18	Send challenge webpage to TRC	Cristina Grosso	09/24/18	Complete		09/19/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 9/19/18	Announce challenge and disseminate amongst networks	Cristina Grosso	09/24/18	Complete		09/19/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 9/19/18	Score data challenge submissions prior to next TRC meeting	Cristina Grosso	12/07/18		In Progress. Meeting with Richard Looker on 12/7/18.	09/19/18	<input type="checkbox"/>
Technical Review Committee Action Items from 9/19/18	Schedule time during March TRC meeting to discuss lessons learned from data challenge	Philip Trowbridge	03/01/19	Complete	Topic added to list of future agenda items.	09/19/18	<input checked="" type="checkbox"/>
STLS Action Items from 9/13/18	Send the Trends Strategy, including all comments, to STLS members after today's meeting to allow for one more day of review. Finalize the report after any comments are received.	Jing Wu	09/23/18	Complete		09/13/18	<input checked="" type="checkbox"/>
STLS Action Items from 9/13/18	Add a version number, e.g. "Version 1.0," to the Trends Strategy.	jingw@sfei.org	09/19/18	Complete		09/13/18	<input checked="" type="checkbox"/>
STLS Action Items from 9/13/18	Contact USGS and other experts on the use of the Walling Tube and Hamlin samplers to collate any existing knowledge about extended deployments. Determine and quantify extra costs of extended deployment.	Alicia Gilbreath	01/01/19			09/13/18	<input type="checkbox"/>

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Primary	Deliverable	Assigned To	Due Date	Status	Comments	Meeting Date	Complete
STLS Action Items from 9/13/18	Further refine the CECs in stormwater site matrix by adding the following details: - Explicitly define the CECs in stormwater study questions - what exact questions are to be answered. - Clearly state desired target watershed characteristics. Target a broad range of land use and watershed sizes. - Be sure not to bundle sites into a few geographic areas. - Identify which sites could overlap with POC and/or PMU stormwater monitoring. - Add a title and date to the matrix for tracking purposes.	Rebecca Sutton	10/01/18			09/13/18	<input type="checkbox"/>
STLS Action Items from 9/13/18	Jing to consider how an extra CECs reference site could be of interest to trends model development. See Lester's comment: "Is this of interest for the trends model development - is there an opportunity here to gather data to support model calibration - lets make sure these reference sites are at USGS flow gauges so that we can add a PCB sample in the future if it would be helpful...Jing - in general - start thinking about what you would design for calibration data for the trends modeling - lets stay out in front of that if possible..."	jingw@sfei.org	05/05/19			09/13/18	<input type="checkbox"/>
STLS Action Items from 9/13/18	Send out draft PCB congener figures for STLS review.	Jay Davis	09/20/18	Complete		09/13/18	<input checked="" type="checkbox"/>
STLS Action Items from 9/13/18	Jay and Don to review Lester's draft ADA report and combine with Jay's congener profile analysis to create the first draft of the ADA report. Send out for STLS review.	Jay Davis	10/04/18	Complete	STLS agreed to extend the deadline for reviewing draft report to October 18.	09/13/18	<input checked="" type="checkbox"/>
STLS Action Items from 9/13/18	Bonnie De Berry and Lisa Sabin to share BASMAA data to support congener profile analysis.	Jay Davis	09/26/18	Complete		09/13/18	<input checked="" type="checkbox"/>
STLS Action Items from 9/13/18	Share Jay and Lester's slides with STLS.	Jay Davis	09/20/18	Complete		09/13/18	<input checked="" type="checkbox"/>
STLS Action Items from 8/13/18	Send out the POC comments from SPL members and Richard Looker a tracked version of the report for the POC and trends report.	jingw@sfei.org	08/17/18	Complete		08/13/18	<input checked="" type="checkbox"/>
STLS Action Items from 8/13/18	For the AFR report, page 7 under heading stormwater concentrations above table 2 fix the comparison in the last sentence.	Diana Lin	08/24/18	Complete		08/13/18	<input checked="" type="checkbox"/>
STLS Action Items from 8/13/18	We should add a caveat in the Guadalupe model report that the budget doesn't include management oversight or coordination.	Jennifer Hunt	08/31/18	Complete		08/13/18	<input checked="" type="checkbox"/>
STLS Action Items from 8/13/18	Create the links in the RMP update when the reports have been finalized.	Ila Shimabuku	09/15/18	Complete	Waiting on PCB, Selenium, and Dioxin reports	08/13/18	<input checked="" type="checkbox"/>
STLS Action Items from 8/13/18	Review all 4 STLS reports by the end of August	STLS	08/31/18	Complete	Review completed in September	08/13/18	<input checked="" type="checkbox"/>
STLS Action Items from 8/13/18	Work with countywide programs on site selection and discuss site allocation at the September meeting	Alicia Gilbreath		Complete		08/13/18	<input checked="" type="checkbox"/>
STLS Action Items from 8/13/18	We will discuss the report review process at the September meeting.	jingw@sfei.org	08/13/18	Complete		08/13/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 7/25/18	Finalize the April SC meeting summary.	Ila Shimabuku	08/15/18	Complete		07/25/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 7/25/18	Clean up contact list for RMP invoices.	ninab@sfei.org	08/20/18	Complete		07/25/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 7/25/18	Confirm 2017 dredge volumes with DMMO and John Coleman.	Philip Trowbridge	08/20/18	Complete		07/25/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 7/25/18	Hold a future discussion on increasing the amount for the RMP Undesignated Funds Reserve from \$200,000 to \$400,000 so as to better reflect moneys that are truly "reserves" versus "undesignated funds."	Philip Trowbridge	10/31/18	Complete	On agenda	07/25/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 7/25/18	Add discussion points to the Multi-Year Planning Workshop: the future of the RMP's selenium and microplastic workgroups.	Philip Trowbridge	10/15/18	Complete		07/25/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 7/25/18	Bring forward specific nutrient studies that should be added to the SEP list during a fall SC meeting.	Philip Trowbridge	01/31/19	Complete	Topic delayed to January SC meeting. Topic put on list of future agenda items.	07/25/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 7/25/18	Send South Bay selenium model report and dioxin report to Peter Carroll.	Jay Davis	08/20/18	Complete		07/25/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 7/25/18	Work with Tom Mumley, Karin North, and Leah Walker to revise Annual Meeting agenda and share it with the Steering Committee by email for final comments.	Jay Davis	08/27/18	Complete		07/25/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 7/25/18	Decide on the theme of the 2019 Pulse of the Bay during the October Steering Committee meeting.	Philip Trowbridge	10/31/18	Complete	On agenda	07/25/18	<input checked="" type="checkbox"/>

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Primary	Deliverable	Assigned To	Due Date	Status	Comments	Meeting Date	Complete
Technical Review Committee Action Items from 6/14/18	Address Richard's comment and finalize the March 14, 2018, TRC meeting summary and post to the website.	Ila Shimabuku	07/02/18	Complete		06/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 6/14/18	Confirm the December 13 meeting date with absent TRC members and schedule meeting once confirmed.	Ila Shimabuku	07/09/18	Complete		06/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 6/14/18	Discuss TRC recommendations to improve the process for special studies funding with the SC in July.	Philip Trowbridge	07/24/18	Complete		06/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 6/14/18	Update the SEP List based on the TRC recommendations and present it to the Steering Committee in July.	Philip Trowbridge	07/25/18	Complete		06/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 6/14/18	Report on copper results produced from BAL re-analysis at the September TRC meeting. Decide which method(s) to use in future years for copper analysis and how long to have overlap between old and new methods.	Don Yee	09/30/18	Complete	BAL will provide data on reanalysis before TRC meeting, ongoing discussion on reasons for discrepancy/ analytical alternatives	06/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 6/14/18	When SCCWRP publishes their final report, contextualize their findings for the RMP in a memo.	Don Yee	12/31/18		Bowen Du back from family leave, draft revised tables in internal SCCWRP review ~11/15. Bowen provided data prior to final resubmission by a few "failing" labs, but all supposedly have passed.	06/14/18	<input type="checkbox"/>
Technical Review Committee Action Items from 6/14/18	Prepare a proposal to analyze sediment archives from the margins for legacy pesticides.	Philip Trowbridge	12/31/18		Delayed to the December TRC meeting when continued margins monitoring will be discussed.	06/14/18	<input type="checkbox"/>
Technical Review Committee Action Items from 6/14/18	Get more information on the North Bay Fire talk from Kevin Lunde.	Naomi Feger	07/25/18	Complete		06/14/18	<input checked="" type="checkbox"/>
Selenium WG Action Items from 5/29/18	Develop management triggers & more clearly outline what kinds of changes we are trying to detect	Jay Davis	07/01/18	Complete		05/29/18	<input checked="" type="checkbox"/>
Selenium WG Action Items from 5/29/18	Identify secondary clam laboratory	Don Yee	07/01/18		TBD based on outcome of clam IC study	05/29/18	<input type="checkbox"/>
SPLWG Action Items from 5/23/18	Re-analyze the accuracy of passive samplers: - Revise the linear regression plots by switching the axes so that the manual water composite data are on the y-axis. - Perform a linear regression of the Hamlin data against the Walling tube data.	Alicia Gilbreath	06/01/18	Complete	Plan to address the item when the POC report is finalized by 07/30/2018.	05/23/18	<input checked="" type="checkbox"/>
SPLWG Action Items from 5/23/18	Evaluate usability of new passive sampler created by the City of Seattle.	Alicia Gilbreath	06/01/18		ongoing	05/23/18	<input type="checkbox"/>
SPLWG Action Items from 5/23/18	Revise reconnaissance monitoring proposal by integrating feedback from SPLWG.	Alicia Gilbreath	06/01/18	Complete		05/23/18	<input checked="" type="checkbox"/>
SPLWG Action Items from 5/23/18	Add discussion of a fourth transport mechanism where PCBs are stochastically or randomly available, i.e., development/demolition, spills, etc. to the report. Add it to the list of possible mechanisms and be explicit about this gap in understanding.	lester@sfei.org	07/20/18		Plan to address the item when the draft ADA report is completed by 08/31/2018.	05/23/18	<input checked="" type="checkbox"/>
SPLWG Action Items from 5/23/18	Add a flowchart to the ADA technical report that visualizes assumptions made as well as sources of uncertainty at each step of the normalization process.	lester@sfei.org	07/20/18		Plan to address the item when the draft ADA report is completed by 08/31/2018.	05/23/18	<input checked="" type="checkbox"/>
SPLWG Action Items from 5/23/18	In the report, add a table showing how the ranks have changed relative to the "old" ranking methodologies.	lester@sfei.org	07/20/18		Plan to address the item when the draft ADA report is completed by 08/31/2018.	05/23/18	<input checked="" type="checkbox"/>
SPLWG Action Items from 5/23/18	Revise the "Regional model development to support trends strategy" proposal to incorporate SPLWG feedback. Include in the modeling plan a description of why the past Guadalupe model was discontinued, any lessons learned from that effort, and what's changed since then to help provide greater confidence to support HSPF as the recommended model platform.	jingw@sfei.org	06/01/18	Complete	Proposal was revised. The other comments will be incorporated by the time the modeling plan is developed next year	05/23/18	<input checked="" type="checkbox"/>
SPLWG Action Items from 5/23/18	Revise CECs in Urban Stormwater proposal to incorporate SPLWG feedback. Increase timeline and budget.	Rebecca Sutton	06/01/18	Complete		05/23/18	<input checked="" type="checkbox"/>
SPLWG Action Items from 5/23/18	Discuss the deprioritization of Richmond Harbor as a Priority Margin Unit site with Lucile Paquette.	Jay Davis	07/01/18			05/23/18	<input checked="" type="checkbox"/>
Microplastic WG Action Items from 5/15/18	Decision to form subgroup to discuss and determine subsampling approach. The group agreed that subsampling is necessary. Volunteers for the subgroup include Chelsea Rochman, Don Yee, Nirmela Arsem, and Eric Dunlavy.	Meg Sedlak	07/01/18			05/15/18	<input checked="" type="checkbox"/>

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PCBWG Action Items from 5/3/18	Updated PCB Multi-Year Plan	Jay Davis	06/01/19			05/03/18	<input type="checkbox"/>
Steering Committee Action Items from 4/25/18	Finalize the January SC meeting summary.	Ila Shimabuku	05/01/18	Complete		04/25/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 4/25/18	Send calendar invites for SC meeting dates in 2019.	Ila Shimabuku	05/01/18	Complete		04/25/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 4/25/18	Prepare discussion materials (the cost associated with each workgroup, the cost to prepare proposals vs convene the WG, and recent outcomes from each WG) to inform a long-term planning discussion on the future of RMP workgroups at the 2018 MYP workshop.	Philip Trowbridge	10/01/18	Complete	On agenda	04/25/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 4/25/18	Add agenda item to June 14 TRC meeting: ask the TRC to recommend a study that could be funded immediately using \$82,000 of available SEP funds (either a new study that can start immediately or a study from the list of possible SEPs).	Philip Trowbridge	06/01/18	Complete	On agenda.	04/25/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 4/25/18	Prepare an agenda for the October MYP Workshop that the SC can review in July.	Philip Trowbridge	07/15/18	Complete	On agenda	04/25/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 4/25/18	Email a draft 2018 RMP Annual Meeting agenda (with talk titles, speaker names, and moderators) for SC review.	Jay Davis	05/14/18	Complete	Sent 6/4/18.	04/25/18	<input checked="" type="checkbox"/>
STLS Action Items from 4/12/18	SFEI will send a data request for the other POC data for advanced data analysis	lester@sfei.org	05/01/18	Complete		04/12/18	<input checked="" type="checkbox"/>
STLS Action Items from 4/12/18	remote sensors at an upcoming meeting	Jing Wu	05/01/18	Complete		04/12/18	<input checked="" type="checkbox"/>
STLS Action Items from 4/12/18	revise march meeting summary and send out for approval	Jing Wu	05/01/18	Complete		04/12/18	<input checked="" type="checkbox"/>
STLS Action Items from 4/12/18	sfei to request recent finalized POC data	Jing Wu	05/01/18	Complete		04/12/18	<input checked="" type="checkbox"/>
STLS Action Items from 4/12/18	check with Jay how weathered aroclors are and if they are appropriate site source indicators	lester@sfei.org	05/01/18	Complete		04/12/18	<input checked="" type="checkbox"/>
STLS Action Items from 4/12/18	consider setting up a members only stls part of web site to store meeting materials	Jing Wu	09/01/18	Complete	A member only Google Folder was created to store meeting materials, starting 2018/09.	04/12/18	<input checked="" type="checkbox"/>
STLS Action Items from 4/12/18	share the advanced data analysis ppt. make sure the file size is small enough to email.	lester@sfei.org	05/01/18	Complete		04/12/18	<input checked="" type="checkbox"/>
ECWG Action Items from 4/12/18	Establish pathways monitoring strategy subgroup and schedule future meetings	Rebecca Sutton	05/15/18	Complete		04/12/18	<input checked="" type="checkbox"/>
ECWG Action Items from 4/12/18	Develop new ethoxylated surfactants study	Rebecca Sutton	05/15/18	Complete		04/12/18	<input checked="" type="checkbox"/>
ECWG Action Items from 4/12/18	Revise stormwater screening, CEC strategy, and sunscreens proposals	Rebecca Sutton	05/15/18	Complete		04/12/18	<input checked="" type="checkbox"/>
EEWG Action Items from 4/11/18	Prepare a revised ER proposal that includes improving the method for sediment extraction.	Nancy Denslow	05/01/18	Complete		04/11/18	<input checked="" type="checkbox"/>
EEWG Action Items from 4/11/18	Distribute new proposal from Nancy Denslow about Sediment Extraction Methods to the EEWG for review and prioritization.	Philip Trowbridge	05/01/18	Complete		04/11/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 3/14/18	Finalize the December 14, 2017, TRC meeting summary and post to the website and public-meetings folder.	Ila Shimabuku	03/20/18	Complete		03/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 3/14/18	Confirm the September 20 meeting date with Chris Sommers, Shannon Alford, and Jim Mazza. Schedule meeting once confirmed.	Ila Shimabuku	03/26/18	Complete	This date did not work. Staff are using a doodle poll to fix a new date.	03/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 3/14/18	Check on the status of 2018 bivalve sampling permits.	Paul Salop	04/01/18	Complete		03/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 3/14/18	Create a document or web page on the SFEI website which explains the differences in USGS, RMP, and WB segmentations; shows a map which delineates the differences in segmentation; and includes links to Phil's slides from today's TRC meeting as well as relevant historical materials such as the 1987 "Segmentation of the San Francisco Bay/Delta" report.	Ila Shimabuku	12/31/18	Complete	Report drafted and sent to the TRC on 6/4/18. Comments will be addressed by the end of the year. Just kidding! Handed of to NMS as it's truly a nutrients issue.	03/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 3/14/18	Check whether BAL would consider lowering their minimum detection limit by a factor of two in anticipation of the 2019 selenium repeat study.	Don Yee	06/01/18	Complete		03/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 3/14/18	Determine whether DOC results from the 2017 Water Cruise can provide insight the direction of the bias between the RP and IP results for copper.	Don Yee	06/01/18	Complete	DOC correlation is unnecessary since they already pinned it on a Ti interference	03/14/18	<input checked="" type="checkbox"/>

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Primary	Deliverable	Assigned To	Due Date	Status	Comments	Meeting Date	Complete
Technical Review Committee Action Items from 3/14/18	Look into historical copper data from USGS, San Jose, and S.R. Hanson. Ask Tony Rattone at SFJUC analyze samples collected for the selenium IC study for dissolved copper. Develop visual comparisons for presentation to the TRC in June.	Don Yee	06/01/18	Complete		03/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 3/14/18	Report back to the TRC with a draft final project description including judging criteria.	Cristina Grosso	09/30/18	Complete	On agenda for September TRC meeting	03/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 3/14/18	Notify the Steering Committee of the data analysis challenge by email.	Philip Trowbridge	03/20/18	Complete		03/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 3/14/18	Replace the Guadalupe trends topic with a presentation on results from the Advanced Data Analysis project in the Annual Meeting draft agenda and update with other ideas.	Jay Davis	04/01/18	Complete		03/14/18	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 3/14/18	Discuss organizing a Bay-Delta session at SETAC with Bridgette DeShields.	Philip Trowbridge	04/01/18	Complete		03/14/18	<input checked="" type="checkbox"/>
STLS Action Items from 3/8/18	Schedule symposium kick-off meeting and craft brief meeting agenda.	jingw@sfei.org	03/23/18	Complete		03/08/18	<input checked="" type="checkbox"/>
STLS Action Items from 3/8/18	Send refined workplan, and updated methodology outline to STLS as soon as possible.	Lester McKee	04/05/18	Complete		03/08/18	<input checked="" type="checkbox"/>
STLS Action Items from 3/8/18	Confirm that conference rooms and join.me meeting reservations are appropriately secured to ensure prompt beginnings of future STLS meetings.	Ila Shimabuku	03/12/18	Complete		03/08/18	<input checked="" type="checkbox"/>
STLS Action Items from 3/8/18	Send out updated trends strategy outline.	jingw@sfei.org	03/23/18	Complete	Draft outline sent to STLS on 4/16/2018.	03/08/18	<input checked="" type="checkbox"/>
STLS Action Items from 3/8/18	Include a draft agenda for the 2018 SPLWG meeting in the April STLS agenda package. Use last year's SPLWG meeting agenda as a template.	jingw@sfei.org	04/05/18	Complete		03/08/18	<input checked="" type="checkbox"/>
STLS Action Items from 2/15/18	Finalize RSWM and associate documentation, and distribute for use.	Alicia Gilbreath	03/31/18	Complete		02/15/18	<input checked="" type="checkbox"/>
STLS Action Items from 2/15/18	Send out a list of management questions, a draft memo outline, and the proposed timeline for review.	Diana Lin	02/20/18	Complete		02/15/18	<input checked="" type="checkbox"/>
STLS Action Items from 2/15/18	Send out monthly STLS calendar events for the remainder of 2018.	Ila Shimabuku	02/24/18	Complete		02/15/18	<input checked="" type="checkbox"/>
STLS Action Items from 2/15/18	Send out an email confirming future STLS meetings dates and March agenda items as well as a request for special study proposals from BASMAA.	jingw@sfei.org	02/20/18	Complete		02/15/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 1/24/18	Update Steering Committee roster, email lists, and future meeting invitations to include new members	Ila Shimabuku	02/15/18	Complete		01/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 1/24/18	Highlight the adjusted SC and TRC meeting start and end times when sending out the agenda packages.	Philip Trowbridge	03/07/18	Complete		01/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 1/24/18	Report back to the Steering Committee on how the acoustic release samplers were purchased.	Philip Trowbridge	04/25/18	Complete	On agenda	01/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 1/24/18	Update 2018 and 2015 RMP budgets to reflect SC approvals on 1/24/18.	Philip Trowbridge	01/31/18	Complete		01/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 1/24/18	Change footnote text on page six of the multi-year plan from "Triggers will be updated..." to "Comparisons to triggers will be updated..."	Ila Shimabuku	01/29/18	Complete		01/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 1/24/18	Send a link to the microplastics video to the SC when it is ready to be released.	Rebecca Sutton	02/15/18	Complete		01/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 1/24/18	Share finalized slides from Item 8 with Steering Committee.	Philip Trowbridge	01/29/18	Complete		01/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 1/24/18	Regarding sediment strategy: Look into collaborative efforts with Santa Clara Valley Water District, BAFPA, Jim Fiedler, and the Resilient by Design project.	Philip Trowbridge	01/31/18	Complete	A study to evaluate data from flood control agencies was added to the lists of potential studies.	01/24/18	<input checked="" type="checkbox"/>
Steering Committee Action Items from 1/24/18	Proceed with booking October 11 with the David Brower Center and send out a save-the-date to SC and TRC committee members.	Ila Shimabuku	02/01/18	Complete		01/24/18	<input checked="" type="checkbox"/>
STLS Action Items from 1/18/18	SFEI will add some additional background to flesh out the process for the scope development. More info on how the conceptual model will build off previous work or not. Recommendation: look back at the proposal, and revise the workplan based on the proposal. If there are changes from the proposal then call out those changes in workplan. Use the same language as the proposal. Send out for review and will determine if more discussion is needed.	Rebecca Sutton		Complete		01/18/18	<input checked="" type="checkbox"/>

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Primary	Deliverable	Assigned To	Due Date	Status	Comments	Meeting Date	Complete
Technical Review Committee Action Items from 12/14/17	Finalize the September 14, 2017, TRC meeting summary and post to the website and public-meetings folder.	Ila Shimabuku	12/20/17	Complete		12/14/17	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 12/14/17	Upload powerpoint of latest copper and cyanide concentrations from the 2017 Water Cruise to RMP web page after data and slides have been finalized.	Ila Shimabuku	09/30/18	Complete	Delayed until data were been QA'ed.	12/14/17	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 12/14/17	Add agenda item to March TRC meeting: Discuss the differences in the names and boundaries of the Bay segments used by the RMP, Water Board, and USGS.	Philip Trowbridge	12/31/18	Complete		12/14/17	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 12/14/17	Look into moving two bivalve sites outside of State Lands Commission territory.	Paul Salop	01/01/18	Complete		12/14/17	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 12/14/17	Present a proposal for the purchase of an acoustic-release system to the SC in January. The proposal is to include budgeting and permitting information.	Paul Salop	01/01/18	Complete	On agenda for 1/24/18 SC meeting. Verbal update will be given.	12/14/17	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 12/14/17	Add the North Bay fires event to the "Summary of RMP Program Changes" spreadsheet.	Ila Shimabuku	12/20/17	Complete		12/14/17	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 12/14/17	Consider a "What Made the Headlines" article in the upcoming RMP Update (and future reports) that includes significant water-quality-related events like substantial RMP findings, excessive rainfall, fires, Dungeness crab closures, shark die-offs, and others.	Jay Davis	03/01/18	Complete		12/14/17	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 12/14/17	Implement the TRC's suggestions regarding lab intercomparison studies.	Philip Trowbridge	01/01/18	Complete		12/14/17	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 12/14/17	Implement the TRC's suggestions regarding lab intercomparison studies.	Don Yee	01/01/18	Complete	Went to Bight '18 Chem planning meeting. Many of our priority tissue & sediment matrix analytes, will request contract lab participation, & solicit stakeholder (BASMAA/BACWA) internal & contract labs	12/14/17	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 12/14/17	Look into what methods the selenium IC labs used to calculate the minimum detection limit.	Don Yee	01/01/18	Complete	currently communicating w/ labs on their MDL derivation methods	12/14/17	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 12/14/17	Include explicit financial penalties for overdue datasets in future RMP laboratory contracts.	Philip Trowbridge	01/01/18	Complete	After discussion with QA staff, we decided that this provision would create more challenges than it would solve. Fixing data that were incorrect because the lab was rushing is worse than late data. The current practice of checking in with labs regularly is already working well.	12/14/17	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 12/14/17	Present any steps taken on Richard's data-analysis contest to the TRC.	Cristina Grosso	03/01/18	Complete	On agenda for 3/14/18 meeting	12/14/17	<input checked="" type="checkbox"/>
Technical Review Committee Action Items from 12/14/17	Implement the TRC's suggestions for informatics.	Cristina Grosso	12/31/18	Complete		12/14/17	<input checked="" type="checkbox"/>

Bay RMP Deliverables Scorecard Report

Key to Status Colors:

Green indicates greater than 90 days until the deliverable is due.

Yellow indicates a deliverable due within 90 days.

Red indicates a deliverable that is overdue.

Focus Area	Project	Primary	Deliverable	Assigned To	Due Date	Due Date Extended	Old Due Date	Status	Comments
Annual Reporting	Bay RMP (2019)	4. Annual Reporting	2019 Annual Meeting Agenda	Jay Davis	06/30/19	☐		●	
Annual Reporting	Bay RMP (2019)	4. Annual Reporting	Pulse Report	Jay Davis	09/30/19	☐		●	
Annual Reporting	Bay RMP (2019)	4. Annual Reporting	2019 Annual Meeting Venue and Catering Reservations	ninab@sfei.org	10/01/19	☐		●	Brower Center has been reserved for 10/10. Nina to handle reservations closer to meeting.
Annual Reporting	Bay RMP (2019)	4. Annual Reporting	Annual Meeting	Philip Trowbridge	10/10/19	☐		●	
Communications	Bay RMP (2018)	5. Communications	Q4 RMP eUpdate	Jay Davis	12/31/18	☐		●	
Communications	Bay RMP (2019)	5. Communications	Q1 Estuary News Article	Jay Davis	03/31/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	Q1 RMP eUpdate	Jay Davis	03/31/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	Updates to RMP and NMS websites	ninab@sfei.org	03/31/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	Q2 Estuary News Article	Jay Davis	06/30/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	Q2 RMP eUpdate	Jay Davis	06/30/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	Updates to RMP and NMS websites	ninab@sfei.org	06/30/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	Q3 Estuary News Article	Jay Davis	09/30/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	Updates to RMP and NMS websites	ninab@sfei.org	09/30/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	Q3 RMP eUpdate	Jay Davis	10/31/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	RMP Update to BACWA	Philip Trowbridge	10/31/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	RMP Update to BASMAA	Philip Trowbridge	10/31/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	RMP Update to LTMS	Philip Trowbridge	10/31/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	RMP Update to BPC	Philip Trowbridge	10/31/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	RMP Update to WSPA	Philip Trowbridge	10/31/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	RMP Update at RB2 Meeting	Philip Trowbridge	10/31/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	Q4 Estuary News Article	Jay Davis	12/31/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	Q4 RMP eUpdate	Jay Davis	12/31/19	☐		●	
Communications	Bay RMP (2019)	5. Communications	Updates to RMP and NMS websites	ninab@sfei.org	12/31/19	☐		●	
Data Management	Bay RMP (2018)	3. QA and Data Services	Database Maintenance	Amy Franz	12/31/18	☐		●	(1) Add 2002 and 2003 CTR data to CD3 (2) Add basic water quality data from YSI for RMP water cruises in 2010, 11, 12, 15 to CD3 (3) Check that all records in the legacy RMP database are also in the RDC database (4) Make sure all RMP data has associated Lat/Longs so data can be exchanged with WQX (5) Move RDC database to Data 2 (6) Update database to implement changes made by CEDEN for standard vocabulary codes, business rules and database structure (7) Update records and address issues as identified by internal staff (8) Perform scheduled database maintenance. (\$6,250)

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Focus Area	Project	Primary	Deliverable	Assigned To	Due Date	Due Date Extended	Old Due Date	Status	Comments
Data Management	Bay RMP (2018)	3. QA and Data Services	Updates to SOPs and Templates	Amy Franz	12/31/18				Convert old java code for Pulse maps to R (1) Modify and design data reporting templates. (2) Update queries for bird and bivalve tissue data (3) Maintain data management standard operating procedures and work flow documentation (4) Continue discussion on how to manage sums (5) Continue to work with CEDEN to provide input of updating the CEDEN data checker with SWRCB staff.
Data Management	Bay RMP (2018)	3. QA and Data Services	QA Officer Report for 2018 S&T Activities	Don Yee	03/31/19				Report will cover 2018 Bird Egg, 2018 Bivalve, and 2018 Sediment data.
Data Management	Bay RMP (2018)	3. QA and Data Services	Online Data Access CD3	Cristina Grosso	06/30/19		12/31/18		Revised due date: 6/30/19 #2 Expanding the functionality of the data download tool was more costly than expected. Therefore, #1 and #5 will be completed in 2019. (1) Pending: Automate generation of TEQs; (2) Completed: Expand functionality of data download tool; (3) Completed: Implement display of toxicity summary data; (4) In-progress: Tool maintenance and performance upgrades; (5) In-progress: Add the SFB Basin Planning Units to CD3
Dioxin	Bay RMP (2017)	Dioxin Synthesis Report	Dioxin Synthesis Report	Don Yee	12/28/18		12/31/17		Final will be completed by Dec 2018.
Emerging Contaminants	Bay RMP (2016)	EC Non-targeted Analysis	Report on Non-Targeted Analysis of Water-Soluble CEC Compounds	Rebecca Sutton	03/31/19		06/30/17		Preliminary findings presented to ECWG on 3/30/17. Dr. Ferguson received an extension for his draft report to 5/31/18 to allow him to do additional analyses with newly purchased, faster and higher-resolution equipment. Dr. Ferguson was actively working on this report and has been slowed down due to the large number of new detects from the new equipment as well as urgent activities relating to the aftermath of Hurricane Florence. Lee had to take a medical leave in November, further extending the timeline. A draft will be provided to ECWG for review by the workgroup meeting.
Emerging Contaminants	Bay RMP (2016)	EC Non-targeted Analysis	Fact Sheet on Non-Targeted Analysis of Water-Soluble CEC Compounds	Rebecca Sutton	03/31/19		06/30/17		Fact sheet is to accompany the final report. Provide final fact sheet to EB Parks.
Emerging Contaminants	Bay RMP (2018)	CUPs and Wastewater Contaminants in Margin Sediment and Water	Technical Report	Matt Heberger	03/31/19		09/30/18		Internal draft due by 12/31/18, draft for external review due by 1/15/19. Final was originally due by 9/30/18. Now is due March 31, 2019. Deadline pushed back because data processing is going slower than expected.
Emerging Contaminants	Bay RMP (2017)	Imidacloprid in Ambient Bay Water	Report on imidacloprid in ambient Bay water	Rebecca Sutton	04/30/19		06/30/18		Expect draft report sent to ECWG for review by end of the year. Due dates extended by 6 months because of delays at the laboratory. Results delivered in April 2018.
Emerging Contaminants	Bay RMP (2019)	EC in Urban Stormwater Year 1	Pilot study sample collection	Rebecca Sutton	04/30/19				
Emerging Contaminants	Bay RMP (2017)	Phosphate Flame Retardants in Bay Water	Report on phosphate flame retardants in ambient Bay water	Rebecca Sutton	05/15/19		09/30/18		Draft report by 3/31/19. Will be taking advantage of comments/discussion from 2019 ECWG meeting. Final due 5/15/19 after review by ECWG. Report was originally due 9/30/18 but data were data were 8 months late. Will be written up in the same report as bisphenols.
Emerging Contaminants	Bay RMP (2017)	Bisphenol in Bay Water	Report on bisphenol compounds in ambient Bay water	Ila Shimabuku	05/15/19		09/30/18		Draft report by 3/31/19. Will be taking advantage of comments/discussion from 2019 ECWG meeting. Final due 5/15/19 after review by ECWG. Report was originally due 9/30/18 but data were data were 8 months late. Will be written up in the same report as OPFRs.
Emerging Contaminants	Bay RMP (2017)	Triclosan in Small Fish	Report on triclosan in small fish	Diana Lin	07/31/19		07/31/18		Report initially delayed because lab partner had not provided data. AXYS was still finalizing the lab method. Data now received and analyzed. Results will be presented at ECWG in April 2019. New schedule: Draft by 4/30/19; final due 7/31/19.
Emerging Contaminants	Bay RMP (2019)	Ethoxylated Surfactants Study	Wastewater and water sample collection	Diana Lin	08/31/19				https://www.sfei.org/sites/default/files/events/ECWG%20-%2004%20-%20Ethoxylated%20Surfactants%20Proposal_2019_TRC.pdf
Emerging Contaminants	Bay RMP (2018)	North Bay Post-Fire Monitoring	Brief technical memorandum with results of non-targeted analysis	Meg Sedlak	11/30/19		11/30/18		On 10/24 SC approved additional 22k of undesignated funds to analyze additional (previously collected) samples.
Emerging Contaminants	Bay RMP (2018)	North Bay Post-Fire Monitoring	Manuscript on results of non-targeted analysis	Rebecca Sutton	11/30/19		01/31/19		On 10/24 SC approved additional 22k of undesignated funds to analyze additional (previously collected) samples.
Emerging Contaminants	Bay RMP (2019)	EC in Urban Stormwater Year 1	Sampling and analysis plan for Years 2-3	Rebecca Sutton	11/30/19				
Emerging Contaminants	Bay RMP (2018)	Non-targeted Analysis of Sediment and Water	Fact sheet and technical report	Rebecca Sutton	12/31/19		08/02/19		De-prioritized for ECWG meeting in favor of North Bay Fire NTA. Draft report and fact sheet by fall '19; Final report and fact sheet by Dec '19.
Emerging Contaminants	Bay RMP (2018)	Non-targeted Analysis of Sediment and Water	Manuscript	Rebecca Sutton	12/31/19		08/02/18		De-prioritized for ECWG meeting in favor of North Bay Fire NTA. Draft report and fact sheet by fall '19; Final report and fact sheet by Dec '19.
Emerging Contaminants	Bay RMP (2019)	Ethoxylated Surfactants Study	QA of data and upload to CEDEN	Amy Franz	02/28/20				
Emerging Contaminants	Bay RMP (2019)	EC Strategy	Update RMP CEC Strategy Document	Rebecca Sutton	04/01/20				https://www.sfei.org/sites/default/files/events/ECWG%20-%2001%20-%20ECstrategyProposal2019.pdf
Emerging Contaminants	Bay RMP (2019)	Ethoxylated Surfactants Study	Preliminary results presentation at ECWG Meeting	Diana Lin	04/01/20				

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Focus Area	Project	Primary	Deliverable	Assigned To	Due Date	Due Date Extended	Old Due Date	Status	Comments
Emerging Contaminants	Bay RMP (2019)	EC Strategy	Present updated RMP CEC Strategy at SC	Rebecca Sutton	05/31/20				
Emerging Contaminants	Bay RMP (2019)	Ethoxylated Surfactants Study	Manuscript and summary for managers	Diana Lin	08/01/20				Draft due 8/31/20. Final due 1/31/21.
Exposure and Effects	Bay RMP (2018)	Synthesis of Benthic Community Data in the Whole of San Francisco Bay using the M-AMBI Index	Technical memo covering the M-AMBI threshold adjustment process and the results of the validation exercise	Philip Trowbridge	01/31/19		12/15/18		Contractor (SCCWRP) requested an extension to end of January 2019.
Exposure and Effects	RMP SEP	9. DMMO Data Synthesis for PCBs	Technical Report	Jay Davis	03/30/19				The results of the PCB data analysis from the DMMO data will be reported as a technical report. SEP deadline was revised from 9/30/18.
Governance	Bay RMP (2018)	2. Governance	Honoraria Payments for Science Advisors	Philip Trowbridge	12/31/18				
Governance	Bay RMP (2019)	2. Governance	January SC Meeting	Philip Trowbridge	01/01/19				
Governance	Bay RMP (2019)	2. Governance	March TRC Meeting	Philip Trowbridge	03/01/19				
Governance	Bay RMP (2019)	2. Governance	April SC Meeting	Philip Trowbridge	04/01/19				
Governance	Bay RMP (2019)	2. Governance	ECWG Meeting	Rebecca Sutton	05/31/19				
Governance	Bay RMP (2019)	2. Governance	Microplastics WG Meeting	Meg Sedlak	05/31/19				
Governance	Bay RMP (2019)	2. Governance	SPLWG Meeting	Jing Wu	05/31/19				
Governance	Bay RMP (2019)	2. Governance	PCB WG Meeting	Jay Davis	05/31/19				
Governance	Bay RMP (2019)	2. Governance	Selenium WG Meeting	Jay Davis	05/31/19				
Governance	Bay RMP (2019)	2. Governance	Sediment WG Meeting	Scott Dusterhoff	05/31/19				
Governance	Bay RMP (2019)	2. Governance	July SC Meeting	Philip Trowbridge	06/01/19				
Governance	Bay RMP (2019)	2. Governance	June TRC Meeting	Philip Trowbridge	06/01/19				
Governance	Bay RMP (2019)	2. Governance	September TRC Meeting	Philip Trowbridge	09/01/19				
Governance	Bay RMP (2019)	2. Governance	October SC Meeting	Philip Trowbridge	10/01/19				
Governance	Bay RMP (2019)	2. Governance	December TRC Meeting	Philip Trowbridge	12/01/19				
Microplastics	Bay RMP (2018)	Microplastics in San Francisco Bivalves	Presentation to TRC/SC	Meg Sedlak	06/17/19				
Microplastics	Bay RMP (2017)	Microplastic Characterization Study (Moore Foundation)	Baseline Report - Year 2	Meg Sedlak	09/02/19				Due to the complexity of the analyses, we have received an extension. The final report is due 9/01/2019.
Microplastics	Bay RMP (2018)	Microplastics in San Francisco Bivalves	Technical Report	Meg Sedlak	09/02/19				Margin samples have been collected. Bay samples will be collected in October. Results will be included in the Moore Microplastic Project final report.
Microplastics	Bay RMP (2019)	Microplastic Strategy	Update RMP Microplastic Strategy (appendix to existing strategy)	Rebecca Sutton	09/30/19				https://www.sfei.org/sites/default/files/events/MPWG%20-%2001%20-%20Priority1StrategyProposal2019FINAL.pdf
Microplastics	Bay RMP (2019)	Microplastics in Sport Fish	Coordinate collection and archiving of sport fish samples for microplastic analysis	Meg Sedlak	10/31/19				Funding was not allocated for lab analysis. The samples will just be collected and archived. https://www.sfei.org/sites/default/files/events/MPWG%20-%2002%20-%20Priority2Microplastic%20in%20Sportfish%20Proposal05292018.pdf
Microplastics	Bay RMP (2019)	Microplastic Strategy	Present updated Microplastic Strategy to SC	Rebecca Sutton	01/31/20				
PCB Strategy	Bay RMP (2016)	PCB Margins Conceptual Model	San Leandro Bay Conceptual Model Report	Jay Davis	11/30/18		03/31/18		Draft was sent to PCBWG on 5/3/18. Last comments received on September 10. Final by December 2018.
PCB Strategy	Bay RMP (2018)	San Leandro Bay Fish Diet Analysis	Technical Report	Jay Davis	12/31/18		03/31/18		Andy Jahn subcontract. Final report nearly completed.
PCB Strategy	Bay RMP (2017)	PCB Margins Conceptual Model	Steinberger Slough Priority Margin Unit Conceptual Model Report	Jay Davis	06/28/19		08/31/17		Revised due dates due to workflow and timing of WG meeting. Draft for WG/TRC/SC by March 2019. Final by June 2019.
PCB Strategy	Bay RMP (2019)	PCB Strategy	Updated PCB multi-year plan	Jay Davis	06/30/19				https://www.sfei.org/sites/default/files/events/PCBWG%20-%2001%20-%20Strategy%20Support%20and%20Technical%20Coordination%202019.pdf
PCB Strategy	RMP SEP	12. PCB Shiner Surfperch PMU Survey	Sample collection and analysis (documented in S&T Sampling and Analysis Plan and Sampling Report)	Jay Davis	12/31/19				Coordinated sampling of PCBs in shiner surfperch in four PMUs as an add-on to S&T sport fish sampling. https://www.sfei.org/sites/default/files/events/PCBWG%20-%2003%20-%20Shiner%20Surfperch%20PMU%20Survey%20Revised.pdf

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Focus Area	Project	Primary	Deliverable	Assigned To	Due Date	Due Date Extended	Old Due Date	Status	Comments
PCB Strategy	Bay RMP (2019)	Priority Margin Unit Stormwater PCB Monitoring	Stormwater sample collection at Emeryville Crescent sites in WY19 and WY20	Alicia Gilbreath	04/30/20			●	Analysis of samples will be covered by SEP funds (3300-011-A). Results will be reported in the WY20 STLS POC Reconnaissance Monitoring Report (due 12/31/20). https://www.sfei.org/sites/default/files/events/PCBWG%20-%2002%20-%20Priority%20Margin%20Unit%20Stormwater%20PCB.pdf
PCB Strategy	RMP SEP	11. PCB Stormwater Monitoring for PMUs	Analysis of stormwater samples from Emeryville Crescent sites in WY19 and WY20	Alicia Gilbreath	09/30/20			●	Samples will be collected with core funds (3018-021). Results will be reported in the WY20 STLS POC Recon Sampling Report. https://www.sfei.org/sites/default/files/events/PCBWG%20-%2002%20-%20Priority%20Margin%20Unit%20Stormwater%20PCB.pdf
PCB Strategy	RMP SEP	11. PCB Stormwater Monitoring for PMUs	Collection and analysis of stormwater samples from San Leandro Bay sites in WY19 and WY20	Alicia Gilbreath	09/30/20			●	Results will be reported in the WY20 STLS POC Recon Sampling Report.
PCB Strategy	RMP SEP	12. PCB Shiner Surfperch PMU Survey	Special Section in report on RMP S&T Sport Fish Sampling	Jay Davis	12/31/20			●	Draft by December 2020; Final by February 2021.
Program Management	Bay RMP (2019)	1. Program Management	Q1 RMP Financial Report	Philip Trowbridge	01/24/19			●	
Program Management	Bay RMP (2019)	1. Program Management	SC Meeting Stoplight Report	Philip Trowbridge	01/24/19			●	
Program Management	Bay RMP (2018)	1. Program Management	2019 Multi-Year Plan	Philip Trowbridge	01/31/19			●	Draft in October '19, Final in January '19
Program Management	Bay RMP (2018)	1. Program Management	2019 Detailed Workplan	Philip Trowbridge	01/31/19			●	Draft in October '19, Final in January '19
Program Management	Bay RMP (2019)	1. Program Management	Q2 RMP Financial Report	Philip Trowbridge	04/25/19			●	
Program Management	Bay RMP (2019)	1. Program Management	SC Meeting Stoplight Report	Philip Trowbridge	04/25/19			●	
Program Management	Bay RMP (2019)	1. Program Management	Q3 RMP Financial Report	Philip Trowbridge	07/25/19			●	
Program Management	Bay RMP (2019)	1. Program Management	SC Meeting Stoplight Report	Philip Trowbridge	07/25/19			●	
Program Management	Bay RMP (2019)	1. Program Management	2019 Multi-Year Plan	Philip Trowbridge	10/01/19			●	Draft in October '19, final in January '20
Program Management	Bay RMP (2019)	1. Program Management	2019 Detailed Workplan and Budget	Philip Trowbridge	10/01/19			●	Draft in October '19, final in January '20
Program Management	Bay RMP (2019)	1. Program Management	Q4 RMP Financial Report	Philip Trowbridge	10/24/19			●	
Program Management	Bay RMP (2019)	1. Program Management	Update Deltak Program Plans for Open RMP Years	Philip Trowbridge	10/24/19			●	
Program Management	Bay RMP (2019)	1. Program Management	SC Meeting Stoplight Report	Philip Trowbridge	10/24/19			●	
Program Management	Bay RMP (2019)	1. Program Management	RMP Participation Letters for BACWA and WSPA Agencies	Philip Trowbridge	12/31/19			●	Update letters from previous budget year in: S:\Contracts & Proposals - Active\3018 Bay RMP 2018\Participant Fees
Program Management	Bay RMP (2019)	1. Program Management	Honoraria Payments to Science Advisors	Philip Trowbridge	12/31/19			●	Update letters from previous budget year in: S:\Contracts & Proposals - Active\3018 Bay RMP 2018\Honoraria
QA and Data Services	Bay RMP (2019)	3. QA and Data Services	QAPP Update	Don Yee	07/31/19			●	
QA and Data Services	Bay RMP (2019)	3. QA and Data Services	Online Data Access CD3	Cristina Grosso	12/31/19			●	(1) Create shared link and tutorial video for download tool; (2) Add SFB Basic Planning Units; (3) Automate sum generation and TEQs; (4) Link data to the EPA Chemistry Dashboard website
QA and Data Services	Bay RMP (2019)	3. QA and Data Services	Database Maintenance	Amy Franz	12/31/19			●	(1) Enforce VariableCodes constraint; (2) Fix orphaned RMP Tissue Records; (3) Fix Organism Records for prior years RMP; (4) Update location of Yerba Buena Island bivalve stations; (5) Address budget shortfalls resulting from issues encountered during formatting and QA review or add-on datasets not previously budgeted for.
QA and Data Services	Bay RMP (2019)	3. QA and Data Services	Updates to SOPs and Templates	Amy Franz	12/31/19			●	(1) Pulse graphics improvements (2) Update tissue scripts as needed. (3) Expected QA Table (4) Addition to Data Submittal Portal: Include a receipt back to data provider for their records.
QA and Data Services	Bay RMP (2019)	3. QA and Data Services	DMMO Database Support	Amy Franz	12/31/19			●	1) Host and maintain website and database. Implement performance upgrades, including upgrading outdated technology; 2) Train labs/contractors on populating templates; 3) Populate data templates with data stored in PDF reports and upload backlog of data templates to database; 4) Perform improvements to website; 5) Expand querying and mapping of data by adding data to CD3; and 6) 6) Modify website to capture information needed for RMP dredger fee calculations.
QA and Data Services	Bay RMP (2019)	3. QA and Data Services	QA Summary Report for S&T Activities	Don Yee	03/31/20			●	
Sediment Strategy	Bay RMP (2018)	Hosting and Support for DMMO Database	Provide technical assistance for hosting and maintaining the DMMO database	Cristina Grosso	12/15/18			●	Met with Project Team (USACE, USEPA, ExaData, RB2, SFEI) on 5/21/18 and 7/27/18 to review documentation on the DMMO database and website components, data flow, and roles and responsibilities. The group agreed on the priorities for SFEI, and the long-term goals and objectives of the DMMO database. The next Project Team meeting is scheduled for 9/27/18. We've completed the three tasks: provide technical assistance, assist with data uploads, and transfer DMMO website to SFEI server.

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Focus Area	Project	Primary	Deliverable	Assigned To	Due Date	Due Date Extended	Old Due Date	Status	Comments
Sediment Strategy	Bay RMP (2018)	Hosting and Support for DMMO Database	Assist with data uploads	Cristina Grosso	12/15/18				USACE staff compiled an inventory of data reports and templates that are pending upload to the DMMO database. SFEI staff started to develop procedures for populating the templates from data tables stored in PDF Sampling Analysis Reports.
Sediment Strategy	Bay RMP (2018)	Hosting and Support for DMMO Database	Transfer DMMO website to SFEI server and maintain domain registration	Cristina Grosso	12/15/18				Added task in place of "Tier 1" query. SFEI staff have started the process of obtaining access to the DMMO website and migrating the website to SFEI's server.
Sediment Strategy	Bay RMP (2019)	Sediment Conceptual Understanding and Monitoring Strategy	Framework Report	Scott Dusterhoff	02/28/19				This report is will outline the main concepts for the conceptual understanding and monitoring strategy for initial feedback.
Sediment Strategy	Bay RMP (2018)	Improved Lower South Bay suspended-sediment flux measurements at Dumbarton Bridge	Basic Data Report with sediment flux computations, detail of methods used, and data generated from the study, with no interpretation	Daniel Livsey	03/31/19				USGS subcontract
Sediment Strategy	Bay RMP (2019)	Sediment Conceptual Understanding and Monitoring Strategy	Expert Review of Framework Report	Scott Dusterhoff	03/31/19				
Sediment Strategy	Bay RMP (2019)	Sediment Beneficial Reuse Workshop	Workshop	Jay Davis	03/31/19				Prepare background materials, organize & facilitate workshop https://www.sfei.org/sites/default/files/events/SedimentWG%20-%2003%20-%20Trowbridge%20-%20Beneficial%20Reuse%20Thresholds.pdf
Sediment Strategy	Bay RMP (2018)	Mallard Island Suspended Sediment Monitoring	Data collected, processed and QA/QCed by the USGS. Data made available to the public once approved.	Maureen Downing-Kunz	04/30/19				USGS subcontract
Sediment Strategy	Bay RMP (2019)	Sediment Bulk Density Study	Technical Report	Jeremy Lowe	04/30/19				4/30 due date is a draft in time for sediment WG. Final due in August. The proposal had the project starting in October 2018 before the start of funding was known. The funds don't start until January 1 2019. Deliverables were pushed back by the same amount (3 months). So due date for draft framework should be 05/30/19. This is not a time critical deliverable, all the work will be completed in 2019, and no other projects are dependent on it.
Sediment Strategy	Bay RMP (2017)	Sediment Monitoring Strategy	Sediment Monitoring Strategy (in collaboration with HWRB Project)	Melissa Foley	05/31/19				Draft for Sediment WG by May 2019. Final by August 2019. This project was amended with additional funding in 2019 (Project 3019-045) and new due dates were set. The original due date was 6/30/19. Part of Healthy Watershed Resilient Baylands Project.
Sediment Strategy	Bay RMP (2019)	Sediment Conceptual Understanding and Monitoring Strategy	Technical Report	Scott Dusterhoff	05/31/19				Draft for Sediment WG by May 2019. Final by August 2019. This report will be published by SFEI as a Healthy Watersheds/Resilient Baylands-RMP joint-funded report.
Sediment Strategy	Bay RMP (2019)	Sediment Bathymetric Change Study (Year 1)	Update to the RMP Sediment Workgroup on preliminary results	Bruce Jaffe (USGS)	05/31/19				Contract with Bruce Jaffe USGS. Project was split between two years. This is the first year of funding. The contract (#1385) has language for the 2nd year. If the second year of funding is approved, the contract can be amended to increase the funding amount. https://www.sfei.org/sites/default/files/events/SedimentWG%20-%2002%20-%20Jaffe%20-%20USGS%20Whole%20Bay%20Erosion%20and%20Accretion%20Update%205-24-18.pdf
Sediment Strategy	Bay RMP (2019)	Sediment Beneficial Reuse Workshop	Workshop summary	Jay Davis	05/31/19				Draft summary by May 2019 (for Sediment WG). Final by September 2019.
Sediment Strategy	RMP SEP	10. Napa and Sonoma Streamgages	Data Products	Scott Wright (USGS)	06/30/19				For both gauges: suspended sediment and bedload sediment sample results as well as 15-minute records of turbidity, SSC, suspended load, and bedload (depending on rating curves developed) served on the USGS public website.
Sediment Strategy	RMP SEP	10. Napa and Sonoma Streamgages	Presentation	Scott Wright (USGS)	06/30/19				Presentation slides showing an analysis of sediment loads and comparisons with historical data. Presentation to be made at the Sediment WG meeting if possible.
Sediment Strategy	Bay RMP (2019)	Sediment Bulk Density Study	Draft Framework for local expert review	Jeremy Lowe	08/30/19				https://www.sfei.org/sites/default/files/events/SedimentWG%20-%2004%20-%20Lowe%20-%20Bulk%20density%20RMP%20Special%20Studies%20Proposal.pdf
Sediment Strategy	Bay RMP (2019)	Sediment Conceptual Understanding and Monitoring Strategy	Presentation of Final Conceptual Understanding and Strategy	Scott Dusterhoff	10/31/19				Forum will be the RMP Sediment WG or a Healthy Watersheds/Resilient Baylands Project meeting.
Sediment Strategy	Bay RMP (2019)	Sediment Bathymetric Change Study (Year 1)	USGS Data Release with new bathymetric grids for San Pablo Bay, Carquinez Strait, and Suisun Bay	Bruce Jaffe (USGS)	12/31/19				Contract with Bruce Jaffe USGS. Project was split between two years. This is the first year of funding. The contract (#1385) has language for the 2nd year. If the second year of funding is approved, the contract can be amended to increase the funding amount. https://www.sfei.org/sites/default/files/events/SedimentWG%20-%2002%20-%20Jaffe%20-%20USGS%20Whole%20Bay%20Erosion%20and%20Accretion%20Update%205-24-18.pdf

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Focus Area	Project	Primary	Deliverable	Assigned To	Due Date	Due Date Extended	Old Due Date	Status	Comments
Sediment Strategy	Bay RMP (2019)	Sediment Bathymetric Change Study (Year 1)	Presentation at the 2019 State of the Estuary Conference on interim results	Bruce Jaffe (USGS)	12/31/19				Contract with Bruce Jaffe USGS. Project was split between two years. This is the first year of funding. The contract (#1385) has language for the 2nd year. If the second year of funding is approved, the contract can be amended to increase the funding amount. https://www.sfei.org/sites/default/files/events/SedimentWG%20-%2002%20-%20Jaffe%20-%20USGS%20Whole%20Bay%20Erosion%20and%20Accretion%20Update%205-24-18.pdf
Sediment Strategy	RMP SEP	13. Lower South Bay Sediment Transport Monitoring Study	Upload 2019 data on turbidity, suspended sediment concentrations, sediment flux, and particle size data to a public USGS website.	Daniel Livsey	03/30/20				•For the period 1/1/2019 – 09/30/2019, 15-minute records of turbidity, suspended-sediment concentration, and suspended-sediment flux served on USGS public website. •For the period 1/1/2019 – 09/30/2019, discrete suspended-sediment sample results served on USGS public website. •Particle size and density data needed to measure effects of flocculation served on a USGS public website
Sediment Strategy	RMP SEP	13. Lower South Bay Sediment Transport Monitoring Study	Interpretive Technical Report	Daniel Livsey	12/31/20				•Interpretive technical report for the RMP of the results of the work conducted in 2018 – 2019. The interpretive report will be submitted to the RMP as a draft by December 31, 2020, and will be published by March 31, 2021.
Selenium Strategy	Bay RMP (2015)	Selenium Special Studies / Selenium Sturgeon Tissue Plug Monitoring	2015 Sturgeon Muscle Plug Final Report	Jay Davis	12/31/18		05/31/16		Preliminary results presented at the Selenium Workgroup meeting in May 2016 and at the RMP Annual Meeting in October 2016. To get the most value from this deliverable and to be efficient with reviewers' times, this report will be rolled into a larger report on the tissue plug results from 2015, 2016, and 2017. Draft shared with SeWG in May 2018. Final by 12/31/18.
Selenium Strategy	Bay RMP (2016)	Selenium 2016 Derby Monitoring	2016 Sturgeon Derby Final Report	Jay Davis	12/31/18		12/31/16		2016 Derby results will be combined with 2017 Derby results in one report. Combining data will make for a better analysis. Draft shared with SeWG in May 2018. Final by 12/31/18.
Selenium Strategy	Bay RMP (2017)	2017 Sturgeon Derby Monitoring	Technical Report on Selenium in White Sturgeon from the 2017 Sturgeon Derby	Jay Davis	12/31/18		12/31/17		Draft shared with SeWG in May 2018. Data from 2016 and 2017 will be combined into one report. Will be finalized by Dec 2018.
Selenium Strategy	RMP SEP	6. Suisun Bay Selenium Monitoring Study	Field Studies Report (2015, 2016, 2017 Muscle Plug Data)	Jay Davis	12/31/18				MMP funds. Report will combine results for muscle plugs from 2015, 2016, and 2017. Funds from budget year 2015 will for the 2015 Plug Report will be also used for this report. Draft shared with SeWG in May 2018. Final by December 2018. SEP deadline is 12/31/18.
Selenium Strategy	RMP SEP	8. North Bay Selenium Synthesis	Monitoring Design Framework Report	Jay Davis	12/31/18				Draft shared with SeWG in May 2018. Final by December 2018. SEP deadline is 12/31/18.
Selenium Strategy	Bay RMP (2019)	Selenium Strategy	Update Selenium Multi-Year Plan	Jay Davis	06/30/19				https://www.sfei.org/sites/default/files/events/SeWG%20-%2001%20-%20Strategy%20Support%20and%20Technical%20Coordination%202019.pdf
Selenium Strategy	Bay RMP (2019)	Selenium in Muscle Plugs	Collect and analyze muscle plug samples	ninab@sfei.org	03/31/20				Muscle plug samples will be collected during CDFW cruises between August and October 2019. Laboratory analysis will follow. Data management and reporting was not funded. https://www.sfei.org/sites/default/files/events/SeWG%20-%2003%20-%20Sturgeon%20Muscle%20Plug.pdf
Selenium Strategy	Bay RMP (2019)	Selenium in Clams and Water	Collect and analyze water and clam samples	ninab@sfei.org	06/30/20				Clam and water samples will be collected at two locations in Suisun Bay. Samples will be collected in Jul-19, Aug-19, Sep-19, Dec-19, Jan-20, and Feb-20. Data management and reporting was not funded. https://www.sfei.org/sites/default/files/events/SeWG%20-%2002%20-%20North%20Bay%20Clam%20and%20Water.pdf
Sources Pathways and Loadings	Bay RMP (2018)	Small Tributaries Loading Program Management	STLS management	Jennifer Hunt	12/31/18				STLS Management (meeting agendas, meeting summaries, tracking and addressing action items)
Sources Pathways and Loadings	Bay RMP (2018)	Small Tributaries Loading POC Watershed Characterization Reconnaissance Monitoring	Technical report on the WY 2018 reconnaissance monitoring	Alicia Gilbreath	03/15/19				
Sources Pathways and Loadings	Bay RMP (2019)	STLS WY19 POC Recon Monitoring	B. Wet season samples collected and sent to labs for analysis	Alicia Gilbreath	04/30/19				
Sources Pathways and Loadings	Bay RMP (2018)	Small Tributaries Loading POC Advanced Data Analysis	Advanced Data Analysis Interpretative Report	Lester McKee	05/01/19		11/01/18		Preliminary results were presented to the SPLWG in May 2018. Draft report completed in 10/2018 and currently under review by STLS. Expect to complete final report by 05/2019.
Sources Pathways and Loadings	Bay RMP (2019)	STLS Regional Model	Modeling Implementation Plan	Jing Wu	05/01/19				Draft for SPLWG review by May 2019. Final by July 2019. Task B "model development" was not funded. https://www.sfei.org/sites/default/files/events/SPLWG%20-%2003%20and%2005%20-%20Regional%20Model%20Development%20for%20Trends%20Strategy.pdf
Sources Pathways and Loadings	Bay RMP (2019)	STLS WY19 POC Recon Monitoring	D.WY19 POC Report	Alicia Gilbreath	11/30/19				Draft by 11/30/19. Final by March 30, 2020.
Sources Pathways and Loadings	Bay RMP (2019)	STLS Advanced Data Analysis (Phase II)	Technical Report on Advanced Data Analysis	Lester McKee	11/30/19				A technical report that provides the technical justification for the methods recommended and outlines in a stepwise fashion how to apply the methods to other Bay Area data sets. Draft for SPLWG by May 2019. Final by November 2019. https://www.sfei.org/sites/default/files/events/SPLWG%20-%2004%20-%20Advanced%20Data%20Analysis.pdf
Status and Trends	Bay RMP (2017)	6. Status and Trends L. PBDE Analysis for Archived 2016 Bird Eggs	Analysis of 12 archived tern egg samples. Results reported in an EDD.	Ila Shimabuku	12/31/18				Archive samples will be run at the same time as the 2018 samples. The results will be QA'ed and uploaded along with the 2018 samples. AXXS gathering permits so Paul can ship.

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Focus Area	Project	Primary	Deliverable	Assigned To	Due Date	Due Date Extended	Old Due Date	Status	Comments
Status and Trends	Bay RMP (2018)	6. Status and Trends F. 2018 Bird Egg Monitoring Data Mgmt	Format, QA, and Upload 2018 Bird Egg Data	Amy Franz	01/01/19				As part of the QA Memo, trend plots of bird egg data will be generated.
Status and Trends	Bay RMP (2017)	6. Status and Trends F. Margins Sediment Study	Final Report for South Bay Margins Sediment Study	Don Yee	02/28/19		12/01/18		Need extension to February. May have a draft report internal staff review by Christmas, out to external review mid Jan. Some prelim graphics and stats will be prepared in powerpoint for TRC mid December.
Status and Trends	Bay RMP (2019)	6. Status and Trends Monitoring	Purge old archives	Ila Shimabuku	02/28/19				
Status and Trends	Bay RMP (2018)	6. Status and Trends D. Bivalve Cruise Data Management	Format, QA, and Upload 2018 Bivalve Cruise Data	Amy Franz	03/01/19				
Status and Trends	Bay RMP (2018)	6. Status and Trends H. 2018 Sediment Cruise Data Mgmt	Format, QA, and Upload 2018 Sediment Cruise Data	Amy Franz	03/01/19				
Status and Trends	Bay RMP (2019)	6. Status and Trends Monitoring	Water Cruise Sampling and Analysis Plan	Amy Franz	05/01/19				
Status and Trends	Bay RMP (2019)	6. Status and Trends Monitoring	Water Cruise subcontracts	Philip Trowbridge	05/01/19				
Status and Trends	Bay RMP (2019)	6. Status and Trends Monitoring	Sport Fish Sampling and Analysis Plan	Jay Davis	05/01/19				
Status and Trends	Bay RMP (2019)	6. Status and Trends Monitoring	Sport Fish subcontracts	Philip Trowbridge	05/01/19				
Status and Trends	Bay RMP (2019)	6. Status and Trends Monitoring	USGS Sacramento Support - Contract	Philip Trowbridge	06/01/19				
Status and Trends	Bay RMP (2019)	6. Status and Trends Monitoring	USGS Menlo Park Support - Contract	Philip Trowbridge	06/01/19				
Status and Trends	Bay RMP (2019)	6. Status and Trends Monitoring	Field Sampling Report	Ila Shimabuku	12/01/19				
Status and Trends	Bay RMP (2019)	6. Status and Trends Monitoring	Process and upload Water Cruise data	Amy Franz	12/31/19				
Status and Trends	Bay RMP (2019)	6. Status and Trends Monitoring	Processing and upload Sport Fish data	Amy Franz	12/31/19				
Status and Trends	Bay RMP (2019)	6. Status and Trends Monitoring	Present to TRC on IC studies	Don Yee	12/31/19				
Status and Trends	Bay RMP (2019)	6. Status and Trends Monitoring	Maintain and enhance the Archive Data Sample tool	Amy Franz	12/31/19				(1) Update documentation and template (2) General upkeep and maintenance for tools and data (3) Set up User Accounts and Help Desk (4) Manage internal and external data requests (5) Purge old archives from Shaeffers.
Status and Trends	Bay RMP (2019)	6. Status and Trends Monitoring	Sport Fish Report	Jay Davis	12/31/20				