Wetlands Regional Monitoring Program
Technical Advisory Committee Meeting
Friday December 1, 2023
11AM - 1PM

Attending:
Karen Thorne, Iryna Dronova, John Callaway, Julian Wood, Levi Lewis, Valary Bloom, Matt Ferner, Susan de la Cruz, Mike Vasey. Jemma Williams

Alex Thomsen, Taylor Pantiga, Donna Ball, Jeremy Lowe, Gwen Miller, Christina Toms, Caitlin Crain, Sarah Pearce, Sarah Lowe, Sasha Harris-Lovett, Melissa Foley

11:00 am   **1) Welcome & Once-Around**

Christina T - Marsh modeling group
https://coastalscience.noaa.gov/project/toward-a-national-coastal-ecosystem-prediction-system/

Caitlin - Will send out the Baylands Resilience report.
  ● This is a reminder to provide any comments on the draft baylands resilience metrics
     report and web map by next Friday (December 8). Please provide comments directly to
     Ellen Plane (ellenp@sfei.org). If you would like to review but need more time, please
     also get in touch with Ellen. See below for more information.

Julian Wood - State of the birds report applied for funding - September next year

Donna - Pond R4 breaching and SETs are being established at this site soon (hopefully next week).

Levi - Completed surveys following the Fish and Fish Habitat SOP, can share results if interested. Sampled sites such as Tolay, Calabasas, Pond A8, Pond A4, Pond A17, Hamilton and more sites. Can present the data to the TAC next year. Two more surveys will be done next year in the North Bay. Will present this work at the state of the estuary conference.
Matt Ferner - That's great, Levi! Exciting to hear about the longfin smelt in the north bay, and their consideration for endangered status. Look forward to learning more at SOE

11:15-11:30   **2) Update and Approval Process for the Hydrogeomorphic Monitoring (HGM) SOP**

Jeremy - Final draft for the HGP SOP is here. There are two remaining pieces: Horizontal/Vertical Control and Water Surface Elevation.

We want the TAC to vote for approval of the SOP through [google forms](link) (link sent via email). Can Approve, Approve with reservations or Needs revision and write in the comments If you fix this XXX then I'll approve.

11:30-12:10   3) Update and Approval Process for the [WRMP Monitoring Plan](link)
Caitlin Crain and Christina Toms

In the final draft of the Monitoring Plan, we are still tweaking a few tables. Overall, it's a high level document. One appendix includes cost estimates, it's hard to come up with these since there are so many unknowns. We are trying to come up with order of magnitude estimates that will be refined and revised in 2024. The Monitoring Plan is a living document and we will make an implementation work plan in 2024.

Process for MP approval - SC meeting Dec 12 from 1pm -3pm where we hope to get SC blessing.

We are sending out a poll for approval for the Monitoring Plan and Hydrogeomorphic SOP - https://forms.gle/FQeA9vWPzAGe96Az5 We will close the poll in the middle of next week.

Discussion:

Levi - Fish surveys also have spot surveys for water quality data. Levi has the location data for this- email him

Matt Ferner - I see some gaps in this map where I know there are active stations. Not a big deal but will add later to the table or whatever. We have several old station pilings in Hill Slough and Peytonia Slough that just lack active data loggers. Please add this one if you don't already have it (I thought it might have been left off the map, but might have missed it): https://cdec.water.ca.gov/jspplot/jspPlotAll.jsp?staid_id=HSL&end=12%2F01%2F2023+11%3A46&cookies=cdec01
Christina - Yes, it's been annoyingly hard to get inventory of everything that is happening.

Julian- there are almost no salinity gauges in marshes in the North Bay. Are we adding these?
Chrisinta - Yes we propose many new gauges the north bay marshes are a real empty spot
Caitlin - we are trying to highlight that the majority of the monitoring is actually within the spine of the estuary not within wetlands.

Christina - all the project sites we've designated are all so different. It's hard to say what's been done at each project site. We are trying to have a database that describes all of this. More details will be harshed out in the implementation work plan

Donna - We are also working hard to fill regulatory needs as well. We are hoping that we describe the elements enough to make the implementation plan.

John - the MP framework looks good

Karen - this has been a long thoughtful process, You have my stamp of approval. It's at a point where I would approve it. MP would be more explicit that birds and mammals will be addressed in 2024 rather than just saying TBD.

12:10-12:40   **4) Existing CRAM Analysis for the WRMP**
                Sarah Pearce and Sarah Lowe, SFEI

This part of the meeting is being recorded and is available here CRAM TAC Video
Link to the CRAM slides available here ☐ 12_1_23 TAC Presentation

Sarah P. - Main goal is to show existing CRAM data and show the future of CRAM.

We used existing estuarine CRAM data (collected 2007-2022) at WRMP sites to retroactive look at marsh condition,
- What is the condition (how does it vary)
- Data gaps
- Guide new CRAM assessment

We (Sarah P. and Sarah L) need more guidance on what project site vs reference means? Project sites just recent restoration sites?

General findings from existing CRAM assessment:
- There were not really enough AAs within sites to characterize the full condition of the site. It was just a random assortment of assessment areas (AAs)

- Not easy to recognize a pattern with CRAM score and site location, maybe (hard to tell) larger marshes have slightly higher scores. Most of the San Francisco Estuary (SFE) wide data falls within Fair condition (62%) few sites in poor

- WRMP priority sites follow a similar distribution of site condition (59 % fair/41% good)

- Looking at the map WRMP priority sites on regional Cumulative Distribution Function (CDF) - the WRMP priority sites are overly skewed to lower 30th percentile

- Usually the benchmark sites have the highest score, then reference sites, then project sites, but there is a big overlap in the score ranges.

- There is a higher median score for benchmark sites SFE wide that are not WRMP priority sites. Lowest scores exist within the non-wrmp priority reference sites

- The big picture is most subembayments have fair condition and the central bay has the worst condition out of the 5 subembayments.

CRAM index score is made up of different attributes - drilling into the attributes help show what's happening at the marsh site.
- Buffer and landscape condition - seeing lots of green (good condition). San Pablo and Central Bay has more development that encroaches on marsh leading to lower scores
- Physical structure - lots of yellow (fair) and red (poor) - This pattern is common throughout the state. Can help with management in future by recommending adding in complexity for projects
- Biotic/Hydrology - These two scores are similar and reflect each other. Lots of fair and poor. The marshes are chopped up with berms and levees, leading to lower scores. The marshes are also more simple or homogeneous in vegetation communities. The berms can make simpler hydrology and thus simpler biotic structure.

Where are the data gaps?
- Even looking at all data (not just WRMP priority sites) there are big gaps especially within the Central Bay.
- Many sites only have 1 AA, none of the sites are really adequate characterized
- There are temporal gaps. Some years have no or few data collections.

Next Steps - Goal is to gain additional spatial coverage of CRAM across WRMP priority network. We will collect 30 AAs in 2024

Discussion:

Julian Wood - How are the CRAM sites selected? Is there a potential for bias in site selection that affects characterization?
Sarah P.- Exactly you hit the nail on the head. Some early data collected to help develop CDF and habitat development curves, some are project sites, none collected to look at overall condition of SF Bay except early study. Placement determination was based on meeting needs of why they are collecting data in the first place.

Christina - Age of the AA's - how old are they? Would be interesting to see how old WRMP data sites are.

Sarah P. - Oldest is 2007 and we used AAs up until 2022 for this analysis. WRMP priority site data are likely on the older side, so this might be a snapshot of the condition back then.

Christina - Has there been any sites CRAMed enough over time to see development?

Sarah P - No, we need to use time for space. Haven't been doing CRAM enough or reassessments enough.

Julian - It's great that benchmark, project and reference scores are in the order we would expect, but there is a bunch of overlap. Is this a problem?

Sarah P - It demands a little more defining what we really mean by project and reference site- what truly is a project versus a reference site? Within the reference set of data, what are actually projects vs average everyday wetlands.

Julian - Yes this came up early on, what reference versus project sites are. CRAM might not be a good enough tool to discriminate against site types.
Sarah P. - I wouldn't argue this. Maybe it's showing what we might not have known. Sites might be more similar than we might expect.

Christina Toms - Is the CRAM analysis on a spreadsheet that TAC members can look at?
Sarah P. - We probably need to clean up the spreadsheet, but we can probably share it
Sarah Lowe - A caveat though is that the data is not self evident, and is available on ecoatlas so yes we can share it.

Mike Vasey - What extent do you record species (like plants)? In these benchmark sites, you have more species diversity, so if you dont record species you lose this.
Sarah P - Yes, CRAM needs to be rapid and consistent. It's recording the number of co-dominance for plant height classes. This is simplified. When we collect the data on the hard sheets we list every species we come across, you can look at the raw data sheets to see these bigger lists. There is a hidden value in the raw data.
Mike - The vegetation species less common and sometimes rare, are not going to show up. But they do create conditions for other species to exist or occur within the sites. Hopefully we get these other ways.
Sarah P- Yes, we want to build a relationship with level 2 and level 3 data.

12:40-12:50   **5) Looking Ahead to 2024**
                 Caitlin Crain, Donna Ball and Christina Toms

For 2024 we will focus on - How we want to implement and what our priorities will be. The fun part! We will possibly create new workgroups (birds and mammals), and will revise SOPs and Monitoring Plan.

There will be
- New CRAM assessments - we will figure out where we want to direct these
- Habitat Map Analysis
- SET-MH findings - USGS will take new readings

2024 TAC meetings - Should we pick a new day of the week? Would love to hear what are better days or times, leaning away from wednesdays or thursdays.

We want to have a joint TAC-SC meeting in early spring, probably in person

We have some new TAC members - Denise
Valary Bloom- Can you remind me why birds and mammals are TBD?
Christina - We don't have a work group yet for these.

Julian Wood- Clarification on 2024 work- you mentioned birds and mammals were part of the next steps but just confirming that these workgroups are not included in the next round of funding, for 2024. Is that correct?
Donna -It just needs to be approved and we need direction from SC, not that it's not going to be funded.

12:50-1:00   **7) Wrap Up**
                Christina Toms and Donna Ball, SFEI (TAC Co-Chair)
                   ● 2024 TAC meeting schedule:

Caitlin - we will email everyone to request approval for the hydrogeomorphic SOP and monitoring plan.

Chat:

Julian Wood - Donna, is that Ravenswood site getting bird surveys to assess response to the breach?

Donna Ball- We do ongoing bird surveys there - it's been a SNPL site up to now and SFBBO will continue to survey those ponds as part of their S.Bay surveys. We have AMP requirements that cover surveys for SMHM and RR that are based on veg establishment at the site.

Matt Ferner - I see some gaps in this map where I know there are active stations. Not a big deal but will add later to the table or whatever
Comparative station/data quality is a whole different beast!
Caitlin - We can share these figures of the data we have and please let us know what we are missing!
Matt Ferner - We have several old station pilings in Hill Slough and Peytonia Slough that just lack active data loggers

John Callaway - maybe indicate in the table what is planned for projects but put an asterisk to indicate that it will happen when appropriate (eg, when vegetation establishes...) -- then there won't be apparent gaps that Julian highlighted

Gwen - We should also note that we graphed active sensors.. But where we can leverage old stations pilings sounds like good info to have

Matt Ferner - Please add this one if you don't already have it (I thought it might have been left off the map, but might have missed it): https://cdec.water.ca.gov/jspplot/jspPlotAll.jsp?staid_id=HSL&end=12%2F01%2F2023+11%3A46&cookies=cdec01

Cailtin - Hard to make big conclusions without systematic distribution - this can be addressed with new data collection

John Callaway - can you send the time for the SC meeting on the Dec 12th

Sasha Harris-Lovett - 1-3 pm, The agenda item on the monitoring plan will be in the first hour, from 1:25 - 2 pm.

Sasha Harris-Lovett - I've heard interest from regulators in CRAM scores of sites compared to years post-restoration (this would be a more nuanced take on categorizing by benchmark, reference, and project sites)