



**Wetlands Regional Monitoring Program  
Technical Advisory Committee Meeting  
Thursday October 5, 2023  
9 - 10:30 AM**

**Attending:** Donna Ball, Christina Toms, Jeremy Lowe, Joy Albertson, Karen Thorne, Kelli McCune, Ali Weber-Stover, John Callaway, Julian Wood, Julie Beale, Stuart Siegel, Iryna Dronova, Karen Verpeet, Gwen Miller, Taylor Pantiga, Levi Lewis, Alex Thomsen, Matt Ferner, Todd Hallenbeck, Sasha Harris-Lovett, Valary Bloom, Josh Collins, Caitlin Crain

**1) Welcome & Once-Around**

Welcome Kelli McCune, the new director of SFBJV - Track and report on Habitat Goals  
SFBJV Implementation Plan - [2022 Implementation Strategy](#)

C.Toms - Grant opportunity: NOAA climate resilience

<https://coastalscience.noaa.gov/news/effects-of-sea-level-rise-program-announces-fy24-funding-opportunity/>

Bay RMP Sediment workgroup - released data from new round of bathymetric survey  
Localized patterns erosion/accretion; mapped by OLU

**2) General WRMP Updates**

Christina Toms, Donna Ball

- [Monitoring Plan](#) + SOP package
- TAC priorities for 2024

Monitoring Plan (MP) + SOP Package - Sending monitoring plan and the SOPs as a package to the steering committee together in time for their December meeting. Needs to be reviewed by the TAC before then. Potentially circulate the package by email or schedule a supplementary informal TAC meeting to discuss the package. Want all this wrapped up by thanksgiving

Week of November 6th potential date for this supplementary meeting - We will circulate a when2meet.

We may need to reschedule the Nov 30th TAC meeting.

Monitoring Plan - this is the "where we want to do what" document - and where we need to use TAC input.

TAC priorities for 2024

- Turn MP into an implementation plan - ongoing Workgroup meetings -

Donna - 2024 will be more fun - Working Group (WG) pros/cons of what we need to monitor - what to recommend to SC for funding; Think about ways to get partners involved

- Support near-term monitoring activities
- SC may request that TAC establish bird and/or mammal WG
- Anything else?

Julie - where are we storing all the data?

- Answer - We have a Geospatial Data Catalog - <https://data.wrmp.org/>
  - It is a catalog but will need to be better populated with relevant data.

Julian - We could reflect on what have we learned (about launching a regional monitoring program)?

- E.g., what have we learned regarding regulatory integration?

### 3) SET-MHs in SF Estuary

Karen Thorne, USGS

John Callaway was an early developer of this approach

This is an universal approach - everyone implementing in the same way so data is comparable NERR and USGS among others have used as monitoring tool

- Sediment Elevation Table - Marker Horizon (SET-MH)
  - Rods driven deep until stable (deep rod as opposed to shallow rods)
  - Feldspar (marker horizon) - accretion/deposition marsh soil development
  - Total elevation change - incorporates below-ground processes and deep subsidence/compaction
- Current distribution of SET-MHs
  - WRMP funding installation of Racoon Island to fill monitoring hole in Napa
  - SET-MH network will be read in Oct-Nov 2023.
  - Racoon island install will be early December 2023
  - NERR is installing in China Camp
    - One from Callaway about 15 years ago
    - One Denise Reed installed a long time ago - this one failed
    - Installing new rod sets - Kyle Derby and Karen first week of Nov, tidal marsh side of China Camp
  - Other installs
    - South Bay - Pond R4 Ravenswood prior to pond breach in December
    - Palo Alto - Horizontal Levee pilot - will be installing next spring/summer
  - Study design developed 10 years ago - paired installation at edge and interior (2 interior and 2 edge)
    - Usually combine the 4 data readings to get one site accretion rate

- Paper in review Estuaries and Coasts - special issue with many good papers on SETs
  - Accretion and total elevation change baseline change since installed 10 years ago
  - Scatter in data; but all increasing
  - Miner Slough in Delta has steep curves, high accretion/elevation change likely due to atmospheric river in 2016
  - Paper also has SETs across the state
  - Data release by end of Oct 2023 on Science Base
    - Can be linked to WRMP
    - Can be created into better data visualizations
  - Where does SF bay fit with CA?
    - Higher accretion and elevation change rates (driven by Browns Island/ maybe North Bay)
    - z\* elevation relative to MHHW - many marshes in CA are high (except some in SFBay)
    - S\* = marsh elevation change relative to local SLR rate and tidal frame position
      - Because higher tidal frame you expect less accretion, less inundated
      - Analyze how accretion is proceeding relative to SLR
      - In general, SFBay is doing fairly well with accretion (Humboldt Bay not pacing SLR)
      - Latitudinal, tides, etc are driving variability
      - Important to build out network so that we can get more info
  - Reading SET network happening now!
    - Read in fall (summer has limitations due to endangered species restrictions)
    - Year to year comparisons are better if done in the same season
    - Installing Racoon Island in December

Donna - reminder that TAC approved SETs as early implementation

Karen - data update - we can make unique WRMP or updates to SFBay

C.Toms - test accessing and visualizing WRMP data

Iryna - any vegetation data taken at SETs? Interested in phenology

Karen - we do survey in for elevation and photopoints, veg surveys while there

- Bolinas all vegetated, now two lower ones are not vegetated -
- Veg quadrat data II SF Bay (2k plots over many years) will be data released later this year
- We should link that to the WRMP - if we want to

## Notes from Chat

- Stuart - Two SETs also exist at Blacklock Restoration Site in Suisun, installed in 2006.
- John C. - Mine are at Coyote Creek, Greco Island, Crissy Field, and China Camp, but haven't been read in a while. If there's interest to get back to them that would be great
- Stuart - Denise Reed also installed several in the Delta (not sure about Suisun) in the 1990s but would need surveying if still in operable condition. I believe they were version 1 designs which are different from the current version 2.
- Christina Toms- I think there's also an SET at Hamilton Wetlands that ESA installed/is monitoring? I'm not sure
  - Caitlin - Yes we've coordinated with Damien Kunz who is responsible for monitoring and plan to coordinate with them.
- Stuart Siegel - For SETs: in preparing the H/V Control SOP based on the just-published NGS guidance document, the one item that stands out from that guidance is the critical nature of very high accuracy establishment of vertical elevations for SETs in part because the guidance identifies SETs as possible pieces of local control benchmarks. Specifically, it notes digital or optical leveling to establish all local control networks for high accuracy elevations.
  - Christina - That's definitely something we want to highlight in the SOPs/Monitoring Plan and fund for implementation
- Josh C - Congrats! These are important data and analyses. Any effort to calibrate SETs against transect elevation data or other data covering a larger area of marsh plain around sets to assess their representativeness? If we moved the SETs 50 m would we get the same results? Is there guidance about where to locate a SET within a marsh drainage system? Accretion rates compared to tidal datum are small for high elevation marshes; what is the error in the analyses (tidal datum estimate error + SET vertical movement error + temp stat variance ..).
  - Stuart - Great questions Josh, fully concur. Especially with my last comment re establishing elevations.
  - Karen - Here a link to a paper in the special issue discussing these issues - <https://link.springer.com/article/10.1007/s12237-023-01263-1> Estuaries and Coasts - Special Issue: Wetland Elevation Dynamics
- Valary Bloom - Thank you Karen! Very interesting visualization... Also I have 2 strong roughly 20 yr olds. 😊 May be in touch!
  - Karen - Yes, please!

## 4) Update: [Hydrogeomorphic SOP](#)

Jeremy Lowe, Caitlin Crain, Christina Toms

- Overview: Structure and content
- Plan for approval over email

We want to tie up loose ends by mid-late October and circulate the Monitoring Plan + SOP package to SC before thanksgiving.

Probably going to seek approval of documents via email.

Joy Alberston -Please note that USFWS drone permissions have become much less restrictive recently.

10:25-10:30 **5) Wrap Up**

Christina Toms, RWQCB (TAC Chair); Donna Ball, SFEI (TAC Co-Chair)

- 2023 TAC meeting schedule:  
11/30 (may have to move; TBA)

Josh - are SOPs intended to be used by folks with or without training? Is there a training component?

Christina - We probably will not talk about training a lot. We assume the groups that are doing these activities right now will continue to do them. Might be some opportunities for training. We should be partnering with other organizations that are doing monitoring so all the weight isn't on the WRMP.