



Wetlands Regional Monitoring Program Steering Committee Meeting

December 14, 2021 10:00 AM - 12:00 PM

Attendees: Erika Castillo (Alameda County Mosquito Abatement), Heidi Nutters (SFEP), Alex Thomsen (SFEP), Caitlin Sweeney (SFEP), Cristina Grosso (SFEI), Tony Hale (SFEI), Christina Toms (Water Board), Ali Weber-Stover (NOAA Fisheries), Pete Kauhanen (SFEI), Moira McEnespy (SCC), Xavier Fernandez (Water Board), Evyan Sloane (SCC), Dave Halsing (SBSRP), Stacy Sherman (CDFW), Brian Meux (NOAA Fisheries), Luisa Valiela (US EPA Region 9), Jana Affonso (USFWS), Laurel Larsen (DSC), Brenda Goeden (BCDC), Mike Chotkowski (USGS), Jessie Olson (Save the Bay), Laura Hollander (SCC), Jessica Davenport (SCC), Tom Kimball (USGS), Sarah Firestone (USACE), Aimee Good (SF Bay NERR), Stuart Siegel (SF Bay NERR)

Meeting Summary/Actions:

- Please fill out the poll indicating your **general availability for 2022 Steering Committee meetings:** <https://forms.gle/9oTykj1fUKfkR5Zm9>. Note that if the 3rd or 4th week is generally best for most months, we will look for a different date for the December meeting.
- The WRMP has been approved for new funding from the EPA Wetland Program Development Grant program and San Francisco Bay Restoration Authority! WRMP staff will bring a programmatic work plan and budget to the Steering Committee in early 2022
- The Fish and Fish Habitat (FFH) and Geospatial Workgroups are finalizing their respective draft SOPs, to be presented to the Steering Committee in 2022. Get in touch with the workgroup leads who presented if you would like to follow up: Ali Weber-Stover (FFH Workgroup; alison.weber-stover@noaa.gov) and Pete Kauhanen (Geospatial Workgroup; petek@sfei.org)
- The WRMP Open House recording is available at [this YouTube link](#). Let Aimee Good (aimee@sfsu.edu) or Alex Thomsen (alexandra.thomsen@sfestuary.org) know if you have follow-up questions/comments about the event
- Meeting minutes from the 9/30/21 Steering Committee meeting were approved

[Folder with meeting presentations, materials, and Zoom chat transcript](#)

[Roster of SC Members](#)

Notes

1) Welcome, Project Update, Announcements ([Project Update slides](#))

- SC announcements
 - Moira: Evyan Sloane is a new Bay Program Deputy Regional Manager with the State Coastal Conservancy (SCC), and will begin taking a role in the WRMP
- SC membership updates
 - Stacy Sherman is the new CA Dept of Fish and Wildlife representative
 - As Moira mentioned, Evyan Sloane will be the new alternate representative for the SCC
- SF Bay Restoration Authority (SFBRA) Governing Board approved funding to SFEI-Aquatic Science Center to begin implementing the WRMP

- ~1M/year for 3 years
- Next steps: develop workplan, schedule, budget
- WRMP team updates
 - Carmen Zamora - new Sea Grant fellow. Regulatory experience and interest in equity/environmental justice. Will be supporting WRMP & other projects
 - Alex Thomsen (current Sea Grant fellow) staying on at SFEP as a Planner and continuing to work on the WRMP
- 2022 meeting dates
 - Please fill out the poll indicating your **general availability**:
<https://forms.gle/9oTykj1fUKfkR5Zm9>
- Estuary Blueprint update: draft Actions for the 2022 Estuary Blueprint have been released for public comment. Let us know what you think!
 - [Draft Actions and public comment information](#)
 - [General Estuary Blueprint information](#)
 - Virtual public input session on January 11th, 2022 from 1-3pm Pacific. [Register here](#)

2) 9/30/21 [Meeting Minutes](#) Approval

- Minutes approved without corrections

3) Program Outlook for 2022 ([Program Outlook slides](#)) - Heidi Nutters, Alex Thomsen (SFEP), Cristina Grosso (SFEI)

- Caitlin Sweeney (SFEP) & Tony Hale (SFEI) presented on the SFBRA proposal in depth at past meetings; the focus of this presentation is on the Phase 3 EPA Wetland Program Development Grant
- Phase 2 Data Management
 - Fit-gap analysis - complete
 - SOPs for Indicators 1 & 3 - ongoing
 - Data collection & sharing - ongoing
 - Baylands Change Basemap - ongoing
- Phase 3 Data Management
 - Ensuring the data management system can accommodate community-based science and data collection that aligns with WRMP indicators
 - Update EcoAtlas Project Tracker to facilitate data collection associated with community-based and tribal projects
 - Co-develop EcoAtlas dashboards to suit the needs of community-based organizations and tribal partners
- Phase 3 Community Engagement & Ecosystem Services Evaluation
 - Community and tribal engagement plan & equity strategy to assess opportunities and areas of growth for the WRMP, to be completed by an equity consultant. Could explore

- prior SC suggestions to identify different opportunities and levels of engagement for community and tribal representatives
 - Implement Charter by filling SC seats (1 unfilled environmental NGO seat, 2 unfilled community/tribal representative seats)
 - Ecosystem Services Working Group to address WRMP Guiding Question 5: How do policies, programs, and projects to protect and restore tidal wetlands benefit and/or impact public health, safety, and recreation?
 - Will identify a suite of indicators for the WRMP to measure benefits and impacts of tidal marsh restoration to people, to add on to those already identified for mosquito & vector control
 - Might involve community and tribal reps, SC and TAC members
- Phase 3 Regulatory Alignment
 - Follow-up to the WRMP Permitting Workshop held in January 2021
 - Regulatory needs assessment to evaluate scientific needs & barriers to incorporation of WRMP monitoring recommendations
 - Strategic roadmap of key decisions, roles, responsibilities
 - Consensus Building Institute is a subawardee helping with the needs assessment and strategic roadmap
 - Cost savings assessment for permittees
 - Strategy for implementing optional monitoring fee
- Program Management
 - SFEI & SFEP have been meeting monthly and are planning an internal program retreat to discuss roles & responsibilities, programmatic work plan & budget
- Comments/questions
 - Brenda: Interested in what we're planning to do with public access & recreation. We need to understand better ways for providing public access. BCDC has been working on public access issues in Suisun w/ Delta Stewardship Council's Adaptive Management Program. Getting feedback/concern about public access in wetland restoration.
 - Erika: Who will be part of the ecosystem services working group?
 - Alex: Still TBD. We'll discuss the TAC's role with Christina and Donna. SC role could be helping to scope the workgroup and ensure we stay focused on WRMP principles & priorities. We plan on holding community & tribal listening sessions in 2022 to hear potential interest in this working group and other areas of the program.

4) Overview of Expected and Potential Future Funding Opportunities - Caitlin Sweeney (SFEP), Moira McEnespy (SCC)

- [Federal funding summary](#) (Caitlin)

- \$24M for EPA SF Bay Geographic Area - doubling the amount available for Water Quality Improvement Fund grant program
 - Funds projects that help implement the Estuary Blueprint, which has an Action focused on the WRMP
- \$132M for EPA National Estuary Program (nationwide). Expecting ~5M for SFEP over 5 years
- Speier bill has passed the House and is in the Senate. Would create an EPA office in the Bay and would provide \$25-50M/year
- \$77M for NOAA National Estuarine Research Reserve System
- \$207M for NOAA Coastal Zone Management Program. Likely through competitive grant programs
- \$492M for NOAA mapping, observations, modeling
- \$492M for National Coastal Resilience Fund
- [State funding summary](#) (Moira). Credit to Warner Chabot (SFEI) for the summary table
 - Of the 5 categories, Building Ocean & Coastal Resilience is most relevant to the WRMP
 - State Parks SLR Adaptation Strategy - State Parks
 - Ocean Protection Trust Fund - OPC
 - Coastal Protection and Adaptation - SCC
 - \$350M in 2022-23, then \$150M in 2023-24
 - Anticipated, not in hand
 - For protection & restoration of coastal & ocean resources from SLR & other impacts of climate change. Calls out some types of projects, including those consistent w/ SF Bay Restoration Authority Act
 - Grant rounds or working with partners
 - Process will create a pipeline for action & future funding needs
 - Strategic planning process will involve coming to different groups. Moira could come back to the SC in 2022 to provide specific ways to get WRMP into the mix. Will also work with SFBJV, Together Bay Area, and other existing Bay collaborations. Some general public meetings too
- Comments/questions
 - Brenda: Wondering about percentage of the SCC funds that would be allocated to the Bay vs other regions
 - Moira: We've received direction from Amy Hutzler & Mary Small to maintain flexibility rather than determining specific amounts or percentages
 - Erika: What's the timeline for the funding?
 - Moira: Generally the standard is a 5 year cycle with ~3 years to get it under contract, and additional 2 years to spend. This is what they'll be requesting. Other state fund timelines may be shorter so there is a possibility for a difference here (this is general fund rather than bond funding). Senior management wants to focus on accelerating projects, but needs outside of

that might be able to be folded in (e.g. community engagement) -- there's a little more flexibility than with bond funding.

- Christina Toms: The state has a somewhat scattershot approach to property acquisition to support adaptation & nature-based restoration. Advisory groups like the TAC could help the state be more strategic about the properties it protects
 - Moira: Welcome reaching out about how to coordinate with the TAC
- Brian: Stuart Siegel may be able to provide info about the NOAA NERRS funding. Becky (Rebecca) Smith may be a contact for NOAA CZM funding. Mapping funding is very ocean/marine focused, and HABs seems to be the nexus for estuary monitoring.

5) Technical Advisory Committee & Workgroups Update - Christina Toms (Water Board; TAC Chair), Ali Weber-Stover (NMFS; TAC member and Fish/Fish Habitat Workgroup Co-Chair), Pete Kauhanen (SFEI; Geospatial Workgroup Chair)

- Last TAC meeting on Dec 2
- A lot of work is being done through the workgroups. Draft SOPs are still being finalized. We hope to have them ready in early 2022
- **Fish & Fish Habitat (FFH) WG Update** - Ali Weber-Stover
 - Workgroup has been moving forward thanks to Levi Lewis (UC Davis), Christina Toms, Stephen Randall (SFSU/Water Board), Zachary Duckworth (NMFS), and many others
 - What kinds of fish monitoring would answer management questions & needs of different agencies?
 - Monitoring review ensures we leverage existing efforts/resources, helps identify gaps. Database was started by Ali, Levi, Christina. Compiled monitoring reports, publications, other resources. Brian Meux provided an initial ~70 documents. Water Board staff Erin Fairley & Morgan Williams did initial database curation. Stephen & Zachary have continued working on the database
 - Specific monitoring review questions on [slide 5](#) (gear types, observations of listed species, what areas are being sampled well and which species/habitats need more effort)
 - Reviewed 82 documents total, including 36 projects, 32 reports used for analysis
 - Most were short-term (1-6 years)
 - Maps on slides were created by Stephen. Missing some data not yet QA/QC-ed
 - Zach has been looking at gear types used. Most used 1-4 gear types
 - Next steps
 - Final formatting, completing inventory analysis
 - Completing effort evaluation
 - Creating draft report
 - Integrating relevant info into the FFH SOP
 - Update on SOP

- Revisited management questions/goals for FFH to identify 3 overarching goals for FFH
- Identified wide range of potential monitoring metrics including focal groups of fish, habitats, associated water quality metrics
- Small subteam conducted a ranking exercise to link monitoring options with the 3 overarching goals
 - Dark colors indicate consensus that we need these data (e.g. water quality)
 - Variation in colors & values indicates some disagreement about whether the data are needed (e.g. different sampling gears)
- Next steps
 - Developing a suite of alternatives, e.g. combining different gear types, which will be reviewed by the full FFH WG before recommending to the TAC
 - Provide recommendation to the TAC
 - Finalize the SOP
- Comments/questions
 - Christina: This process has been very clear and methodical, and could be a repeatable model for future workgroups
 - Luisa: Is there still tension between what monitoring needs in the bay vs tidal marsh? CDFW has long-term collection in the bay, but we are pushing to do this in the tidal marsh setting
 - Ali: Inventory isn't done, so we're not sure where effort is still lacking. There has been a lot of consensus & appreciation that we have these long-term datasets. Inventory is helping explain why not monitoring in other habitats (creeklets, bay margins, etc), we're missing a large portion of the community that are indicative of health
 - Christina: FFH WG is meeting later this week
 - Jana: What's the intersection of this effort with the Delta IEP long-term monitoring program redesign effort?
 - Ali: We've been working with Stacy Sherman & other upper Estuary partners, keeping a "one Estuary" perspective in mind for the future
 - Stacy: Not involved in the redesign either, but any permitting for Delta smelt will go thru IEP in Suisun Marsh, so we should be aware. A longfin smelt science program is also under development. DSC is completing monitoring enterprise review which includes an inventory, which may be of interest
 - Brenda via chat: Stacy, which longfin smelt effort are you referring to?
 - Stacy:
 - <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Stat>

[e-Water-Project/Files/ITP/ITP-Longfin-Science-Plan_SWP_12232020_-F
INAL.pdf](#)

- Tony via chat: Ali, wonderful job! How often would you expect the SOP to be opened for revision? On 5 year intervals, 10 year intervals, or something more continuous? Is there any disadvantage to continuous evolution?
 - Ali:
- **Geospatial WG** - Pete Kauhanen
 - Objectives: clarity, repeatability, transparency, credibility, effectiveness. We want change in the map to represent change on the ground, not noise
 - Process
 - Determining appropriate document structure: partly technical, partly contextual
 - Defining/refining salient questions
 - Built on work from the fit-gap analysis
 - Elaborated questions in conversation with Geospatial Workgroup
 - Addressing questions
 - Met with Christina Toms, Donna Ball, Kass Green, Iryna Dronova, others to provide guidance & identify opportunities
 - Completing the draft
 - Refining habitat classification crosswalks & other parts of SOP
 - Some remaining questions, especially on Indicator 3: Transition Zones
 - Draft SOP will be ready for review in early 2022
 - General mapping approach for Indicator 1
 - Complete baylands map every 5 years, alternating between a Landmark Baylands Map & Baylands Change Update Map
 - Landmark map: object-based image analysis using image segmentation, then machine learning to classify habitat type segments/polygons and manual refinement. Consensus on this being higher accuracy than heads up digitization and provides consistent application of mapping protocols
 - Update map: change detection, which involves reclassifying areas of change to update the previous Landmark Baylands Map. Ensures changes in the map are not reflecting changes in the methods
 - There may also be a need for Special Study mapping recommended by the TAC, triggered by episodic events (e.g. large storms, levee failure)
 - Habitat type classification system
 - Iterative tables and meetings with geospatial WG & TAC
 - Incorporating hydrogeomorphic setting into the classification system
 - Important to maintain consistency

- Ensuring classification system can be crosswalked & wrapped up into BAARI, DARI, SFBJV categories
 - Evaluating options for accuracy assessments
 - Transition zone mapping (Indicator 3)
 - Not a habitat type, but a functional zone
 - Different options for methods:
 - “Upper boundary” methodology. Watershed-down, very inclusive of the different transition zone functions & services, extends a certain amount above MHHW
 - Bay margin methodology uses elevation relative to tidal datum and includes a set of ways to rank different habitats. More focused on immediate flora & fauna refugia & migration space
 - Migration space = subset of transition zone that allows marsh to migrate upward
 - Next steps
 - Next meeting on Dec 16th
 - Comments/questions
 - Brenda: We have t-zones up to levees. Is there a way to capture this issue in mapping? Will the mapping show additional migration space on the other side of the levee? Would vote to include this (areas open for transition even behind levees). As a follow-up: What amount of t-zone is “functional”?
 - Christina: We’re focusing on functional transition zones. If it doesn’t transition to anything, it’s not functional. Want to be inclusive of broad variety of functions of the t-zone, but grounded in how those functions can be supported. We don’t want to overstate abundance of functional t-zone
 - Stuart via chat: I concur with Brenda's comments fully! Potential transition zones (ie, as part of possible restorations) would be super useful to have mapped clearly

6) Debrief of WRMP Open House ([Open House slides](#))

- Dec 8 on Zoom, hosted by the NERR & supported by SFBJV
 - Paired with the SF Estuary Geospatial Working Group meeting
- Main goal of the Open House: overview to provide transparency
- Presentations from Luisa Valiela (background/overview), Donna Ball (science framework), Xavier Fernandez (regulatory nexus), Cristina Grosso (data collection, management, synthesis), Alex Thomsen (community engagement & outreach), panel moderated by Brenda Goeden
- 99 attendees w/ 66 unique organizations represented
- [Recording of the Open House](#)