



Safe to Eat Workgroup (STEW) Meeting Notes



Wednesday, February 28, 2024
1:30 PM - 4:00 PM (Pacific)

[Link to Meeting Slides](#) | [Link to Meeting Recording](#)

Agenda Overview

Item	Topic	Lead	Time
1.	Roll Call, Agenda Review, Goals of the Meeting	Anna Holder	1:30 PM (10 min)
2.	Information: Long-term Monitoring Priorities Assessment Process - Overview & Update Desired Outcome: Inform and update the STEW	Anna Holder	1:40 PM (10 min)
3.	Information: Biomonitoring California Monitoring Priorities Desired Outcome: Inform and update the STEW	Duyen Kauffman	1:50 PM (20 min)
4.	Information: Regional Monitoring Program for Water Quality in San Francisco Bay (Bay RMP) Monitoring Priorities Desired Outcome: Inform and update the STEW	Jay Davis	2:10 PM (20 min)
5.	Information: Southern California Bight Regional Monitoring Program (Bight RMP) Monitoring Priorities Desired Outcome: Inform and update the STEW	Jayme Smith, Alvina Mehinto	2:30 PM (20 min)
6.	Information: Delta Regional Monitoring Program (Delta RMP) Monitoring Priorities Desired Outcome: Inform and update the STEW	Anna Holder for Delta RMP	2:50 PM (5 min)
7.	Information: Central Coast Regional Water Quality Control Board (Region 3) Monitoring Priorities Desired Outcome: Inform and update the STEW	Anna Holder for Melissa Daugherty	2:55 PM (20 min)
Break			3:15 PM (10 min)

Item	Topic	Lead	Time
8.	Information: Long-term Monitoring Priorities Assessment Process - Tribe / CBO / Agency Open Forum Desired Outcome: Inform and update the STEW	Anna Holder	3:25 PM (30 min)
9.	Wrap-up and Adjourn	Anna Holder	3:55 PM (5 min)

Agenda Details

Item 1. Roll Call, Agenda Review, Goals of the Meeting

- See [slides](#) (3-5) and [recording](#) for full discussion

Program/STEW Leads

Anna Holder (SWAMP)
Jay Davis (SFEI)

Peer Review Panel

Harry Ohlendorf (Independent)
Christopher (Chris) Schmitt (U.S. Geological Survey)

OEHHA

Loren Chumney
Tran Pham
Wesley (Wes) Smith

MLML/MPSL

Autumn Bonnema
Billy Jackl

State Board

OIMA/SWAMP
Elena Suglia

Regional Boards

R1:
R2: Gerardo Martinez
R3:
R4: Emily Duncan
R5:
R6: Kelly Huck, Laurie Scribe
R7:
R8: Heather Boyd
R9:

Other

Kelly Chen (Biomonitoring California)
Duyen Kauffman (Biomonitoring California)
Ami Latker (City of San Diego)
Alvina Mehinto (Southern California Coastal Water Research Project)
Alexander Schriewer (NV5)
David (DJ) Schuessler (MBC Aquatic)
Jayme Smith (Southern California Coastal Water Research Project)
Becky Stanton (CA Dept. of Public Health)

Item 2. Long-term Monitoring Priorities Assessment Process - Overview & Update

An update on the Long-term Monitoring Priorities Assessment Process, including upcoming 2024 STEW meeting dates and topics will be presented.

Discussion

- See [slides](#) (6-12) and [recording](#) for full discussion
- No additional questions or discussion

Action Items

- All (especially **Tribes / Agencies / Community-Based Organizations**): See the [Ways to provide feedback section](#).

For the below agenda items, a representative from the listed California Native American Tribe (Tribe), Community-Based Organization (CBO), California State Agency (Agency) or other type of bioaccumulation monitoring partner will present on their near and/or long-term bioaccumulation monitoring needs and priorities.

Item 3. [Biomonitoring California](#) Monitoring Priorities

Discussion

- See [slides](#) (13-30) and [recording](#) for full discussion
- Also see Oct 18, 2023 STEW Meeting Item 5 [Notes](#), [Slides](#) (32-65), and [Recording](#) for a deeper dive into ACE Project results.
- Ranked Biomonitoring California Wish List (Slides 25-28)
 - (1) Measure levels of mercury and PFASs in crab and other shellfish, which were highly consumed by ACE participants
 - (2) Measure levels of PFASs in paired filet/whole fish samples and/or individual fish parts
 - For frequently consumed fish like salmon
 - For bottom feeders like catfish, which were highly consumed by ACE participants
 - Start with archived samples?
 - (3) Measure levels of mercury in paired filet/whole fish samples and/or individual fish parts.
 - Focus on salmon, often promoted as a low-contaminant fish and highly consumed by ACE participants
 - (3) Archive whole fish, heads, skin, and/or organs for future testing for mercury and PFASs
- How much of the ACE studies are regionally focused? Would similar patterns be expected in other areas in the state with similar populations? For example, could findings from the San Francisco area be reasonably applied to the Los Angeles area?
 - There is nothing to indicate that ACE communities are unique and it is likely that general results can likely be applied to similar communities throughout CA.
- Note and discussion of available information on concentrations in certain fish parts.
 - Some information may already be available
 - Composite samples might help clarify the scope of effort needed to understand bioaccumulation in certain fish parts.
 - Information on mercury is likely well known - although some literature review may be needed.
 - Although not much is known with respect to PFAS, undertaking research in that respect should be considered very carefully.
 - Note of logistical difficulty of doing paired samples.
- Has a literature review been completed regarding whether bottom feeders accumulate PFAS?
 - Unsure - but the speaker will consult with the rest of the team and circle back.

Action Items

- Duyen: compile known literature regarding PFAS in bottom feeders; share with STEW.

Item 4. [Regional Monitoring Program for Water Quality in San Francisco Bay \(Bay RMP\) Monitoring Priorities](#)

Discussion

- See [slides](#) (31-42) and [recording](#) for full discussion
- Key framing of presentation: consider what the Bay RMP can do to support the Program (rather than the Program supporting the Bay RMP).
- Are there any plans (or already existing data) to monitor red rock crab?
 - Some monitoring was conducted about 20 years ago.
 - No one has asked about red rock crab recently so it isn't in the 2024 monitoring plan.
 - Note that if proposed - red rock crab could be included in the next round of monitoring.
- Note shared in the chat: The Bay RMP is also archiving fish samples for microplastics analysis

Action Items

- None

Item 5. [Southern California Bight Regional Monitoring Program \(Bight RMP\) Monitoring Priorities](#)

Discussion

- See [slides](#) (43-60) and [recording](#) for full discussion
- Key framing of presentation: update on Bight RMP 2023 monitoring elements
- SWAMP has partnered with the Bight RMP on fish monitoring in the past (2008, 2018). As we think of the Program's long term priorities - should we plan on doing so again in 2028?
 - Yes!
- Is there a plan to look at contaminants potentially associated with the presence of microplastics? For example: Is there an increased level of contaminant concentrations (e.g. PFAS or other chemicals) due to absorption from microplastics?
 - Not at this time. The scope is limited to the presence of microplastics and the association between macroplastics and microplastics.
- Is [Karen McLaughlin](#) still the contact for Bight RMP fish monitoring?
 - Yes.

Action Items

- None

Item 6. [Delta Regional Monitoring Program \(Delta RMP\)](#) Monitoring Priorities

Discussion

- See [slides](#) (61-62) and [recording](#) for full discussion
- No additional questions or discussion

Action Items

- None

Item 7. Central Coast Regional Water Quality Control Board (Region 3) Monitoring Priorities

Discussion

- See [slide](#) (63) and [recording](#) for full discussion
- Also see the [Region 3 Template](#)
- No additional questions or discussion

Action Items

- None

Item 8. Long-term Monitoring Priorities Assessment Process - Tribe / CBO / Agency Open Forum

Any representative from a California Native American Tribe (Tribe), Community-Based Organization (CBO), California State Agency (Agency) or other type of bioaccumulation monitoring partner that would like to share about their near and/or long-term bioaccumulation monitoring needs and priorities may do so at this time.

Tribe / Agency / CBO partners who are unable to present at the Jan 31 or Feb 28 STEW meetings but would still like to provide feedback may do so by completing the [Bioaccumulation Monitoring Priorities Survey](#) by Mar 1, 2024.

Discussion

- See [slide](#) (65) and [recording](#) for full discussion
- No Tribes or CBOs joined or shared during the Open Forum time slot.

Item 9. Wrap-up and Adjourn

Review next steps and action items.

Discussion

- See [slides](#) (66-70) and [recording](#) for full discussion

Action Items

- All (especially **Tribes / Agencies / Community-Based Organizations**): See the [Ways to provide feedback section](#).
- If you represent a **Tribe** and are interested in the Training Series, please [register for the course\(s\) of interest to you!](#)
- If you represent a **Tribe or CBO in the San Francisco Region** and would like to participate in or stay informed of the San Francisco Region Realignment process, please email anna.holder@waterboards.ca.gov.
- Anna: Post meeting materials and recording on the [Meetings page](#), send to STEW email list once complete
- All: Review the [Meetings page](#) and register for Zoom calls, download calendar invites

Ways to provide feedback during the Long-term Monitoring Priorities Assessment

- **Tribes / Agencies / Community-Based Organizations (CBOs)** interested in providing feedback but were unable to present at a past meeting - please complete the [Bioaccumulation Monitoring Priorities Survey](#) by ~~Mar 1, 2024~~ - **EXTENDED to Mar 11, 2024**
- Attend and participate in [upcoming Long-term Monitoring Priorities Assessment & STEW Meetings](#); [Join the STEW email list](#) to stay informed and receive updates.

Recent STEW Meetings with Long-term Monitoring Priorities Assessment Item

Meeting Date	Agenda Item	Meeting Documents
Feb. 28, 2024	Process overview & update <i>Tribe / Agency / CBO Presentations</i>	Slides Notes Recording
Jan. 31, 2024	Regular STEW Meeting Tribe / Agency / CBO Presentations	Slides Notes Recording
Jan. 24, 2024	Process overview & update Water Boards Presentations	Slides Notes Recording
Dec. 20, 2023	Process overview & update Water Boards Presentations	Slides Notes Recording
Nov. 29, 2023	Process overview & update Q&A / Open Forum	Slides Notes Recording
Oct. 18, 2023	Item 7. 2024 Long-term Monitoring Priorities Assessment Process	Slides (pg. 72 - 82) Notes (pg 8 - 10) Recording
Jan. 18, 2023	Item 6. Planning for 2024 Long-term Monitoring Priorities Assessment	Slides (pg. 32 - 35) Notes (pg 7 - 8) Recording

Upcoming Long-term Monitoring Priorities Assessment & STEW Meetings

Meeting Date	Meeting Focus (<i>Tentative</i>)	Meeting Documents
Wed. Mar. 27, 2024 9:30 am - 12:30 pm PT	Process overview & update Reflection, synthesis, priority setting	Registration Link
Wed. Apr. 17, 2024 9:30 am - 12:30 pm PT	Process recap Presentation of priorities & next steps	Registration Link

Meeting Date	Meeting Focus (<i>Tentative</i>)	Meeting Documents
Apr. 24, 2024 9:30 am - 12:30 pm PT	Regular STEW Meeting	Registration Link *
Jul. 31, 2024 9:30 am - 12:30 pm PT	Regular STEW Meeting	Registration Link *
Oct. 30, 2024 9:30 am - 12:30 pm PT	Regular STEW Meeting	Registration Link *

* Attendee can register for all regular STEW meetings at one time

Appendix: SWAMP Bioaccumulation Monitoring Program - Priorities and Needs Update Templates

Link to [blank Water Boards template](#), for reference. Some formatting may be revised in the below templates to reduce page length, but all submitted content remains the same.

Central Coast Regional Water Quality Control Board (Region 3) Template

Regional Contacts

Contact Type	Contact Name	Email Address
SWAMP Coordinator	Melissa Daugherty	Melissa.Daugherty@waterboards.ca.gov
STEW Representative	Melissa Daugherty	Melissa.Daugherty@waterboards.ca.gov
FHAB Coordinator	Melissa Daugherty	Melissa.Daugherty@waterboards.ca.gov
Tribal Coordinator	Daniel Ellis Angela Schroeter (Alternate)	Daniel.Ellis@waterboards.ca.gov Angela.Schroeter@waterboards.ca.gov
Basin Planning Designee	Daniel Ellis Jamie Pratt (Alternate)	Daniel.Ellis@waterboards.ca.gov Jamie.Pratt@waterboards.ca.gov
Other: TMDL	Daniel Ellis	Daniel.Ellis@waterboards.ca.gov

Recent SWAMP Bioaccumulation Monitoring

Please highlight any recent, ongoing, or planned SWAMP Monitoring Projects that have included a bioaccumulation monitoring element. Don't forget to highlight when Regional SWAMP funds were used to augment statewide Bioaccumulation Monitoring Program efforts!

Fiscal Year	Recent / Ongoing / Planned Regional Bioaccumulation Monitoring
2020/21	R3 Subsistence Fishing Project – augment to BOG Coastal Survey (Discretionary Funds)
2021/22	R3 Subsistence Fishing Project – augment to BOG Coastal Survey (Discretionary Funds)
2022/23	R3 Subsistence Fishing Project – augment to BOG Coastal Survey (Discretionary Funds)

Fiscal Year	Recent / Ongoing / Planned Regional Bioaccumulation Monitoring
2023/24	None (see note in section below)
2024/25	None Planned

Additional Notes and/or Resources: Details below summarized from 2022 SWAMP QA Project Write up

Purpose of Study: Central Coast Water Board staff proposed to use discretionary funds to conduct an evaluation of contaminants in fish and shellfish in the central coast region with a focus on areas utilized by disadvantaged communities, such as the coast, bays, estuaries, and lakes/reservoirs. The Central Coast Water Board prioritized this project concept in a 2019 Human Right to Water Workplan. Project Goals - The fundamental question to be addressed by this project is: Are fish and shellfish caught within the central coast region safe to eat?

The specific goals of the study are three-fold:

1. Evaluate which fish/shellfish species are most at risk given tribal and subsistence fishing information for the Central Coast Region (including nontraditional species like sand crabs and shorter life span fishes like rockfish, surf perch, etc.)
2. Evaluate broad spectrum of potential contaminants, including but not limited to metals (methylmercury, selenium, etc.), PCBs, pesticides (DDTs, OCHs, OPs, etc.), PBDEs
3. Evaluate locations where tribal, subsistence, and sportfishing are potential beneficial uses, especially in proximity to disadvantaged communities. Consider phased implementation: Phase 1 - coast, bays, and estuaries and Phase 2 – lakes and reservoirs (consider a Phase 3 for rivers and streams, if funding and additional resources become available).

Brief Background: Contaminants that accumulate in the food web (or “bioaccumulate”) exceed levels of concern in water bodies throughout California, posing threats to human health. Bioaccumulation of methylmercury, PCBs, and other contaminants has led to fish consumption advisories, 303(d) listings, and TMDLs in locations in the Central Coast Region and across the state. Additionally, existing information suggests that disadvantaged communities and individuals who rely on noncommercial catching or gathering of natural aquatic resources, including fish and shellfish, for consumption to meet needs for sustenance may be at higher risk to exposure to such contaminants. A previous assessment conducted by Kennedy Communications in 2018 found that a diversity of people in the Central Coast Region depend on subsistence fishing to increase their protein consumption, and many subsistence fishermen sell some of the fish they catch to augment their income.

Timeframe of Project: This project started in 2020 while the former Bioaccumulation Oversight Group ("BOG" now Bioaccumulation Monitoring Program "BMP") was conducting sampling for the coastal monitoring surveys. This project was intended to be a long-term and phased special study that would augment fishing of additional water bodies while the contracted field teams are already working in or near Region 3 boundaries during the different panel years (e.g., coastal,

lakes/reservoirs, rivers/streams). Unfortunately, this study was terminated after the 2022 field season, due to increased costs associated with the consolidated Statewide Chemistry Contract.

NOTE: R3 also dedicated SWAMP funds to ASC (back in FY 22/23 I believe) to write up a summary report for this special study. However, due to various shipping issues and other complications from a few of the involved labs (e.g., SGS AXYS and Delta Environmental), in addition to data backlogs experienced by SWAMP-IQ, we are still waiting on a complete dataset so that ASC can complete this task.

Regional Priorities

Please describe the top 3 priorities that were identified in your region's most recent Triennial Review Work Plan.

Triennial Review Year: December 2021

Top 3 [Triennial Review Work Plan](#) Priorities:

1. Clarify Uses for Waterbodies Not Specifically Named
2. Develop and Establish or Clarify Turbidity Water Quality Objectives for Aquatic Life
3. Update Basin Plan to Include all Statewide Objectives

Next anticipated Triennial Review Year: December 2024

Additional Notes and/or Resources: [2021 Triennial Review Supplemental Sheet](#)

Tribal Beneficial Use (TBU) Basin Plan Amendment Processes

Please describe where your region is in the TBU process. For more information, visit the [Regional Water Board TBU Progress Updates Page](#) or [TBU Guidance Document](#)

Region's Current TBU Step(s):

- Ongoing Step: Engage with California Tribes and the public
- Step 1: Add Tribal Beneficial Use definitions to basin plans

R3 is currently in the process of Step 1 to be included as an amendment to the Water Quality Control Plan for the Central Coastal Basin (Basin Plan), planning to present to the Central Coast Water Board in 2024.

Formal tribal engagement is planned for early 2024.

Total Maximum Daily Load (TMDL) Program Update

Please provide a brief update on recent, current, upcoming, or planned TMDLs in the region. For more information, visit the [TMDL Program Page](#).

Region's Recent / Current TMDL(s):

- [Santa Ynez River Basin Nutrients TMDL](#)
- [Gabilan Creek Watershed Turbidity TMDL](#)

- [Pinto Lake Biostimulatory Substances/Cyanobacteria TMDL](#)

Region's Upcoming / Planned TMDL(s):

- [Salinas River Watershed Organophosphate Pesticides and Toxicity TMDL](#)
- [Elkhorn Slough and Bennett Slough Biostimulatory Substances TMDL](#)
- [Lower Santa Maria River Watershed Neonicotinoid TMDL](#)

Additional Notes and/or Resources:

- [Automated TMDL Report Card Tool](#)
- [Region 3 Specific TMDL webpage](#)

Regional SWAMP Monitoring Vision

Please describe the vision you have for your Regional SWAMP Monitoring Program when it comes to bioaccumulation monitoring. Note that your vision statement should be relatively short (2-4 sentences) and describe what your SWAMP program desires to achieve in the long-run, generally in a time frame of five to ten years.

R3 seeks to address the fundamental question:

Are fish and shellfish caught within the central coast region safe to eat?

The specific goals are three-fold:

1. Evaluate which fish/shellfish species are most at risk given tribal and subsistence fishing information for the Central Coast Region.
2. Evaluate broad spectrum of potential contaminants; and
3. Evaluate locations where tribal, subsistence, and sportfishing are potential beneficial uses, especially in proximity to disadvantaged communities.

Short term (~next couple of years) – R3 would be interested in:

- Filling data gaps for estuary monitoring
- Investigating other analytes (in addition to Hg and Se), including the list of constituents evaluated during the R3 special study/BOG augment starting in 2020 (i.e., OCs, OPs, PCBs, PBDEs, etc.).
- Fill data gaps regarding advisories or recommendations for any fish species where sample size was limited. This could include further analysis for mercury and selenium, in addition to the other contaminants listed.

Long term (next 3-10yrs) – R3 would be interested in:

- When tribal engagement occurs, R3 staff plan to request feedback for specific waterbodies/locations and species of interest (fish, shellfish, others) and then design a monitoring strategy to evaluate and inform potential advisories.
- Considering different trophic level impacts for things like prey fish.
- Broadening the list of contaminants
- Incorporating the new mercury objectives
- Applying/designating TBUs to appropriate waters, etc.

Future SWAMP Bioaccumulation Monitoring

Please briefly describe any anticipated future SWAMP Monitoring Projects that will include a bioaccumulation monitoring element. Don't forget to highlight if you plan to use Regional SWAMP funds to augment statewide Bioaccumulation Monitoring Program efforts!

[SWAMP Bioaccumulation Monitoring Program Realignment Update](#) (Dec 2022)

Fiscal Year	Anticipated Future Regional Bioaccumulation Monitoring
2025/26	None anticipated (outside of Statewide BOG/STEW efforts in R3)
2026/27	None anticipated (outside of Statewide BOG/STEW efforts in R3)
2027/28	None anticipated (outside of Statewide BOG/STEW efforts in R3)
2028/29	None anticipated (outside of Statewide BOG/STEW efforts in R3)
2029/30	None anticipated (outside of Statewide BOG/STEW efforts in R3)

Additional Notes and/or Resources: Currently, R3 does not plan to conduct any bioaccumulation monitoring/studies or provide funds to supplement or augment any Bioaccumulation Monitoring Program efforts in our region.

However, R3 would like to provide feedback on specific locations/analytes during the next Coastal and inland Lakes/Reservoirs surveys, if those historic statewide Bioaccumulation Monitoring Program elements do continue. R3 will likely put in a request to be selected for the next realignment opportunity during the next solicitation period.

Bioaccumulation Monitoring Wish List

If you had unlimited resources (funding AND people), what bioaccumulation-related monitoring would you like to see in your region? Please be as specific as possible (e.g. include water body names, species and/or analytes of interest).

Example: We would want to fill a data / information / analysis gap related to ...

- Fill data/information gaps for where subsistence and/or tribal uses occur (e.g., which waterbodies) especially those near disadvantaged/underserved communities.
- Fill data/information gaps for which species are targeted for consumption (fish, shellfish, etc.).
- Fill data/information gaps for different habitat types (e.g., nearshore and estuarine species).
- Fill data/information gaps for other constituents/analytes (not comprehensive):
 - Cyanotoxins
 - Microplastics
 - Other CECs (PFAS/PFOA, etc.)

- Investigate/evaluate trophic level impacts.
- Fill data/information gaps for OEHHA advisories (additional fishing efforts to increase sample size or collection of appropriate size classes, collection of additional relevant species, etc.).
- Fill data/information gaps to inform Integrated Report/303(d) Listings.
- Conduct studies in waterbodies where restoration or grant projects have been implemented to measure/evaluate project effectiveness.
- Conduct studies to evaluate fire/natural disaster impacts and recovery.

Generally speaking, R3 is supportive of continuing the coasts and inland lakes and reservoirs surveys as a higher priority, but also supports additional sampling of rivers/streams when resources and program capacity allows.

Bioaccumulation Monitoring Sticking Points

Please highlight any roadblocks or sticking points that are preventing you from being able to do the bioaccumulation monitoring and analysis you would like to be doing in your region.

Common examples include: lack of funding, lack of people, not enough time or subject matter expertise to be able to adequately interpret / visualize / communicate data / results, etc.

The increased costs of the Statewide Consolidated Chemistry Contract make it impossible to fund additional bioaccumulation studies for our region currently and in the foreseeable future.

Furthermore, the lack of people, time, resources, or subject matter expertise, limit staff's ability to conduct any robust data analysis and provide interpretation of data results to effectively communicate and share those data or results to our various interested parties (i.e., internal staff, agency partners, board members, the public, etc.)