



Safe to Eat Workgroup (STEW) Meeting Notes



Wednesday, January 24, 2024
1:30 PM - 4:30 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: North Coast Regional Water Quality Control Board (Region 1) Monitoring Priorities Desired Outcome: Inform and update the STEW	Anna Holder for Rich Fadness	1:50 PM (20 min) (5 min)
4.	Information: San Francisco Regional Water Quality Control Board (Region 2) Monitoring Priorities Desired Outcome: Inform and update the STEW	Gerardo Martinez	2:10 PM (20 min)
5.	Information: Central Coast Regional Water Quality Control Board (Region 3) Monitoring Priorities Desired Outcome: Inform and update the STEW Moved to future meeting	Melissa Daugherty	2:30 PM (20 min)
6.	Information: Central Valley Regional Water Quality Control Board (Region 5) Monitoring Priorities Desired Outcome: Inform and update the STEW	Lauren Leles	2:50 PM (20 min)
Break			3:10 PM (10 min)
7.	Information: Colorado River Basin Regional Water Quality Control Board (Region 7) Monitoring Priorities Desired Outcome: Inform and update the STEW	Emma McCorkle	3:20 PM (20 min)

Item	Topic	Lead	Time
8.	Information: Santa Ana Regional Water Quality Control Board (Region 8) Monitoring Priorities Desired Outcome: Inform and update the STEW	Heather Boyd	3:40 PM (20 min)
9.	Information: State Board Division of Water Quality (DWQ) Monitoring Priorities Desired Outcome: Inform and update the STEW	Lori Webber	4:00 PM (20 min)
10.	Wrap-up and Adjourn	Anna Holder	4:20 PM (10 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)

OEHHA

Loren Chumney
Tran Pham
Wesley (Wes) Smith

MLML/MPSL

Autumn Bonnema
Billy Jackl

State Board

OIMA/SWAMP
Tessa Fojut

DWQ

Lori Webber

Regional Boards

R1:
R2: Kevin Lunde, Gerardo Martinez
R3:
R4:
R5: Lauren Leles
R6:
R7: Emma McCorkle
R8: Heather Boyd, Lauren Briggs, Patrick Lewis
R9: Chad Loflen

Water Quality Monitoring Council

Nick Martorano (OIMA/SWAMP)

Other

Monica Hiner (Tolowa Dee-ni' Nation)
Duyen Kauffman (Biomonitoring California)
Alvina Mehinto (Southern California Coastal Water Research Project)
Mina Ziaei (San Diego County Water Authority)

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](#) (6-13) and [recording](#) for full discussion
- No additional questions or discussion

For the below agenda items, a representative from the region or division will present on their near and/or long-term bioaccumulation monitoring needs and priorities.

Item 3. North Coast Regional Water Quality Control Board (Region 1) Monitoring Priorities

Discussion

- See [slides](#) (14-15) and [recording](#) for full discussion
- Also see the [Region 1 Template](#)

- No additional questions or discussion

Item 4. San Francisco Regional Water Quality Control Board (Region 2) Monitoring Priorities

Discussion

- See [slides](#) (16-28) and [recording](#) for full discussion
- Also see the [Region 2 Template](#)
- Are there any particular contaminants of emerging concern (CECs) that are of interest in the region?
 - PFAS/PFOS
- Where are the Region's bioaccumulation related reports posted?
 - Reports will be posted on the [Region's TMDL webpage](#) as soon as they are available.
- Which waterbody types are of most interest when it comes to mercury concerns?
 - The biggest concerns are with reservoirs since the Regional Monitoring Program for Water Quality in San Francisco Bay ([Bay RMP](#)) collects a lot of data in the San Francisco Bay and the rivers (creeks) in the region are small and there doesn't seem to be as much fishing pressure in those river/creek locations when compared to the reservoirs or the bay.

Item 5. Central Coast Regional Water Quality Control Board (Region 3) Monitoring Priorities

Discussion

- See [slide](#) (29) and [recording](#) for full discussion
- The Region 3 representative was not able to attend the meeting; their presentation will be provided at a future STEW Meeting.

Item 6. Central Valley Regional Water Quality Control Board (Region 5) Monitoring Priorities

Discussion

- See [slide](#) (30) and [recording](#) for full discussion
- Also see the [Region 5 Template](#)
- Are there any particular contaminants of emerging concern (CECs) that are of interest in the region?
 - Nothing in particular at this time.

Item 7. Colorado River Basin Regional Water Quality Control Board (Region 7) Monitoring Priorities

Discussion

- See [slide](#) (31) and [recording](#) for full discussion
- Also see the [Region 7 Template](#)
- Can you speak to the need to continue monitoring legacy pesticides in the region (with specific context of likelihood of needing to drop/cut some things to maintain within budget)?
 - Region 7 continues to see value in monitoring for legacy OC pesticides. While there may be years where concentrations are below water quality objectives, there are others where we see a spike in concentrations. Investigating those trends and potential sources of pesticide spikes is still critical for the Region, particularly with respect to protecting human health.
- Is there a recent document that describes the trends associated with OC pesticide concentrations?
 - Yes - the last [TMDL Staff Report](#) (May 2022) includes a summary of the OC pesticide and organophosphate pesticides for the New River, Alamo River, as well as the Imperial Valley Drain.

Item 8. Santa Ana Regional Water Quality Control Board (Region 8) Monitoring Priorities

Discussion

- See [slide](#) (32) and [recording](#) for full discussion
- Also see the [Region 8 Template](#)
- Discussion of US EPA's proposal to develop selenium water quality criteria in 2018, and subsequent pause shortly thereafter. (See the [Dec. 13, 2018 Federal Register](#) (83 FR 64059) for details)
 - Note the importance of keeping track of any progression of the proposal and development of selenium water quality criteria and acknowledgment that the implementation of selenium water quality criteria may impact how we use our existing data and generate more selenium data needs.
- Does the region know the sources of identified PFAS hotspots?
 - Defer to the [Region's PFAS webpage](#), with particular recommendation to view the [Region's PFAS Investigations Map](#).

Item 9. State Board Division of Water Quality (DWQ) Monitoring Priorities

Discussion

- See [slides](#) (34-36) and [recording](#) for full discussion
- DWQ did not complete a template - see [slides](#) 34-36 for a description of priorities and recommendations.
- Regarding listings based on OEHHA Fish Consumption Advisories - is the listing based solely on the presence of an advisory, or is there some sort of consumption frequency that is used to trigger the listing?
 - Advisories can be used as evidence of a listing, but they must be paired with data in order to formally add a waterbody to the 303(d) list of impaired waters. Recommend referring to the [Listing Policy](#) for specific requirements.
- Are there examples of water bodies that are not assigned a COMM beneficial use but people are, in fact, fishing?
 - It depends on the region and their basin plan, but there can be a large number of water bodies (estimate close to 70 water bodies statewide).
- Acknowledgement of the need for consumption information throughout the state.

Item 10. Wrap-up and Adjourn

Review next steps and action items.

Discussion

- See [slides](#) (37-44) and [recording](#) for full discussion
- Upcoming opportunities to keep in mind:
 - [Bioaccumulation Monitoring Program Training Series](#)
 - Tribal-centered training series co-developed by SWAMP & the California Indian Environmental Alliance (CIEA)
 - Upcoming Courses (all offered 9 am – 12 pm PT, via Zoom)
 - **Jan 30, 2024:** Intro to the Bioaccumulation Monitoring Program and STEW
 - [Slides](#) & [recording](#) have been posted on the [Training Series webpage](#).
 - **Feb 20, 2024:** [Bioaccumulation monitoring study design & preparation](#)
 - **Mar 19, 2024:** [Bioaccumulation monitoring sample collection protocols & processing](#)
 - **Sep 17, 2024:** [Bioaccumulation monitoring data QA/QC & submission to SWAMP/CE DEN](#)
 - San Francisco Region [Realignment](#)
 - Outreach to San Francisco Region Tribes and Community-Based Organizations (CBOs) to take place this week (via email)

- Workshop(s) to begin in Feb 2024
 - Thu. Feb. 29, 1:30 - 3:30 pm - Intro & Process Kick-off (Tribes & CBOs - virtual only)
 - Wed. Mar. 6, 1:30 - 3:30 pm - Feedback from Tribes (virtual only)
 - Mon. Mar. 18, 9 - 11 am - Feedback from CBO (hybrid)
- **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**
- [OEHHA Seafood Safety Toxicologist position](#) open until filled

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

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

- **Tribes / Agencies / Community-Based Organizations (CBOs)** interested in presenting the long-term monitoring priorities assessment discussions - email anna.holder@waterboards.ca.gov the following by **Jan 1, 2024**:
 - Notification of interest in presenting in discussions, and how you would like to share information (e.g. [External Partner Template](#) or other format)
 - A day/time your representative will be able to present the priorities at an upcoming STEW Meeting:
 - Wed. Jan. 31, 2024 (9:30 am - 12:30 pm PT), OR
 - Wed. Feb. 28, 2024 (1:30 pm - 4:30 pm PT)
- **If you are unable to present but would still like to provide feedback** - please complete the [Bioaccumulation Monitoring Priorities Survey](#) by **Mar 1, 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
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. Jan. 31, 2024 9:30 am - 12:30 pm PT	Regular STEW Meeting <i>Tribe / Agency / CBO Presentations</i>	Registration Link*

Meeting Date	Meeting Focus (<i>Tentative</i>)	Meeting Documents
Wed. Feb. 28, 2024 1:30 pm - 4:30 pm PT	Process overview & update <i>Tribe / Agency / CBO Presentations</i>	Registration Link
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
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.

North Coast Regional Water Quality Control Board (Region 1) Template

Regional Contacts

Contact Type	Contact Name	Email Address
SWAMP Coordinator	Rich Fadness	Rich.Fadness@waterboards.ca.gov
STEW Representative	Rich Fadness	Rich.Fadness@waterboards.ca.gov
FHAB Coordinator	Mike Thomas	Michael.Thomas@waterboards.ca.gov
Tribal Coordinator	Cody Walker	Cody.Walker@waterboards.ca.gov
Basin Planning Designee	Lisa Bernard	Lisa.Bernard@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	Statewide Coast Sportfish Contamination Study 2020 (Bodega Harbor) No RB monitoring conducted
2021/22	Statewide Rivers and Streams 2021 (11 river locations)
2022/23	No RB monitoring conducted
2023/24	Statewide Lakes Study (Lake Mendocino, Spring Lake, Dead Lake)
2024/25	Coastal Bioaccumulation Monitoring Survey 2024 (several sites in the queue)

Regional Priorities

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

Triennial Review Year: The 2023 Triennial Review Report (for FYs 24-27)

Staff's proposed planning unit priority projects are documented in the following link
[Proposed Draft 2023 Triennial Review Work Plan](#) (scheduled for Board Hearing early 2024)

Top 3 Triennial Review Work Plan Priorities: N/A - R1 does not rank its priorities.

Next anticipated Triennial Review Year: 2027

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): The North Coast Region adopted TBUs into the Basin Plan in 2003, with several waterbodies designated with the CUL beneficial use. The current TBU project includes outreach and collaboration and consultation work with tribes in the region to determine whether the current Basin Plan definitions or the 2017 State Water Board definitions will better protect their beneficial uses.

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](#).

We need details on purpose of request so we can fill out in a thoughtful manner.

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.

R1 SWAMP does not yet have a vision for bioaccumulation monitoring but R1 SWAMP is planning a long term monitoring framework that may incorporate bioaccumulation monitoring as appropriate.

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	Nothing currently anticipated

Fiscal Year	Anticipated Future Regional Bioaccumulation Monitoring
2026/27	Nothing currently anticipated
2027/28	Nothing currently anticipated
2028/29	Nothing currently anticipated
2029/30	Nothing currently anticipated

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 ...

- To be determined.

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.

- Lack of knowledge about the monitoring objectives and data priorities
- Lack of outreach to affected communities
- Lack of funding
- Lack of staff

San Francisco Regional Water Quality Control Board (Region 2) Template

Regional Contacts

Contact Type	Contact Name	Email Address
SWAMP Coordinator	Kristina Yoshida Rebecca Nordenholt	kristina.yoshida@waterboards.ca.gov rebecca.nordenholt@waterboards.ca.gov
STEW Representative	Kristina Yoshida Gerardo Martinez	kristina.yoshida@waterboards.ca.gov gerardo.martinez@waterboards.ca.gov
FHAB Coordinator	Kristina Yoshida Rebecca Nordenholt	kristina.yoshida@waterboards.ca.gov rebecca.nordenholt@waterboards.ca.gov
Tribal Coordinator	Sami Harper	samantha.harper@waterboards.ca.gov
Basin Planning Designee	Kevin Lunde Richard Looker	kevin.lunde@waterboards.ca.gov richard.looker@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	San Pablo Reservoir: R2 SWAMP/TMDL-R2 Discretionary
2021/22	Calero, Lafayette, Shadow Cliffs, and Soulajule Reservoirs: STEW/R2 SWAMP San Pablo Reservoir: R2 SWAMP/TMDL-R2 Discretionary
2022/23	
2023/24	San Pablo Reservoir: R2 SWAMP/STEW
2024/25	

Regional Priorities

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

Triennial Review Year: 2021

Top 5 [Triennial Review Work Plan](#) Priorities:

1. Climate Change and Wetland Policy Update

2. Nutrient Management Strategy and Dissolved Oxygen Assessment Framework
3. Regional Stream Protection Policy
4. Temperature Limits to Protect Salmonids
5. Designate Tribal and Subsistence Fishing Beneficial Uses

Next anticipated Triennial Review Year: 2024

Additional Notes and/or Resources:

We are currently using SWAMP contract resources to develop a questionnaire to support a project to designate subsistence beneficial use to San Francisco Bay. We will also be working with STEW as part of the STEW realignment in 2024.

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): We are considering the following steps as our current proposed basin plan amendment for tribal cultural resources for San Francisco Bay.

- Step 1: Add Tribal Beneficial Use definitions to basin plans
- Step 2: Gather information for designations
- Step 3: Designate waterbodies or parts of a waterbody with Tribal Beneficial Use(s)

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):

- Guadalupe River Watershed Mercury TMDL
- San Francisco Bay Mercury TMDL
- Tomales Bay Mercury TMDL
- Walker Creek Mercury TMDL

Region's Upcoming / Planned TMDL(s):

- Lake Merritt Low Dissolved Oxygen TMDL Alternative.
- Regionwide Mercury Reservoir Program.

Additional Notes and/or Resources:

We would align our requests for STEW sampling in our region to be associated with both of our upcoming TMDL programs. Our approved TMDLs already have water body specific monitoring requirements so we are getting a lot of data from permittees. As we develop the Region-wide Mercury Reservoir Program, we might identify new water bodies for a basic site assessment, or detailed Hg food web study.

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.

R2 SWAMP is waiting to complete the STEW Realignment process that begins in 2024 to determine if we will pursue future bioaccumulation monitoring. If there are data gaps identified in the STEW Realignment that are not completely addressed during the three-year process, we are open to allocating future SWAMP funds and staff time to collecting this data.

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	
2026/27	San Pablo Reservoir: young fish and prey fish
2027/28	San Pablo Reservoir: young fish and prey fish
2028/29	San Pablo Reservoir: sport fish, young fish, and prey fish
2029/30	San Pablo Reservoir: sport fish, young fish, and prey fish

Additional Notes and/or Resources: This is TMDL alternative work, we will attempt to use permittee funding. Secondly, we will try to tap into 205(j) funding. Lastly, we will use statewide or regional SWAMP funding, if available.

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 ...

We would want to fill an information gap related to hypolimnetic oxygenation systems (HOS) and their impact on fish mercury concentrations and bioaccumulation of mercury in the food web. On November 1st, 2023, East Bay Municipal Utility District (EBMUD) deployed a Speece cone at San Pablo Reservoir. Since 2019, the San Francisco Bay Regional Water Quality Control Board (Water Board) has been collaborating with EBMUD, Marin Municipal Water

District, and STEW to develop a strong pre-oxygenation baseline dataset. The Water Board hypothesizes that the HOS will reduce fish mercury levels by suppressing mercury methylation in the bottom sediments, resulting in less methylmercury release into hypolimnetic waters and less bioaccumulation of methylmercury from water to algae, and thus to higher trophic levels.

Our goal for the future is to build on the pre-oxygenation dataset and develop a strong post-oxygenation dataset to investigate the impacts of HOS and inform management decisions. The post-oxygenation data from San Pablo Reservoir would be extremely beneficial for lake and reservoir owners and operators throughout our region and across the state. If we had unlimited resources, we would like to collect the following: (1) water samples at various depths to be analyzed for total mercury and methylmercury; (2) sport fish (i.e., Largemouth bass, Spotted bass), young fish (Largemouth bass), and prey fish (i.e., Bluegill, Mississippi silversides, and Threadfin shad) to be analyzed for total mercury; and (3) phytoplankton, zooplankton, and crayfish to be analyzed for methylmercury.

In addition to this site-specific project, we would like a reassessment of some mercury impaired water bodies to confirm continued impairment or changes in water quality. Existing data for some impaired water bodies are over a decade old; therefore, this task is essential to continue analyzing time trends. This request may align with DWQs requests. We might also want some data collection to support existing listings depending on how the COMM BU issue is resolved in the Integrated Report context.

In the long term, we might be interested in sampling new reservoirs without existing data and will look to coordinate with OEHAA on their wish list once it is sent to regions. Another bioaccumulation-related monitoring we may want to conduct on the long-term is associated with post-HOS installation in water bodies aside from San Pablo Reservoir. One possibility could be sampling at Briones Reservoir if an oxygenation system is installed in that reservoir. Aside from mercury-related monitoring, we are also interested in monitoring CECs. For example, SFEI is collecting PFAS data in fish from SF Bay, but our region has no data from reservoirs.

Lastly, our region is interested in HABs in SF Bay and reservoirs, but we don't see the connection between HABs and whether fish are safe to eat as the common HABs are toxic to people or dogs via ingestion or inhalation.

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.

Sampling for fish contaminants is expensive so we have only used discretionary funds and R2 SWAMP funds for San Pablo Reservoir to pay for fish sample collection and analyses pre-HOS installation and at some select Hg impaired reservoirs. Mercury is an important pollutant in our region as we have existing TMDLs and future planned TMDL. We could benefit from enhanced risk communication and risk reduction efforts since fishers might not be aware of which fish are

not safe to eat and which fish have lower risk. It would help to get an update on the state law that was supposed to improve fish contaminant warnings at impaired water bodies.

Additional Information or Resources

Please add any additional information, notes, or links to resources that you think will be important to note / reference / discuss during the long-term monitoring priorities assessment process.

Region 2 NPDES wastewater and stormwater permits have been requiring permittees to fund risk reduction work. This work has focused on risk communication to impacted communities. Therefore, these funds and lessons learned from these efforts can support ways to improve risk communication methods with fishers.

Our region will be implementing the STEW realignment in 2024-2026 so we will have resources to engage with tribes, community-based organizations, environmental groups, and other stakeholders regarding fish contaminant issues. That work is likely to affect future regional priorities.

R2 has a project to document subsistence fishing and learn which fish subsistence fishers are eating. These results might lead us to request future monitoring needs based on subsistence fish diets if those differ from the common sportfish.

Central Valley Regional Water Quality Control Board (Region 5) Template

Regional Contacts

Contact Type	Contact Name	Email Address
SWAMP Coordinator	Alisha Wenzel	Alisha.wenzel@waterboards.ca.gov
STEW Representative	Lauren Leles	Lauren.leles@waterboards.ca.gov
FHAB Coordinator	Dana Shultz	Dana.shultz@waterboards.ca.gov
Tribal Coordinator	Adriana Ross	Adriana.ross@waterboards.ca.gov
Basin Planning Designee	Same as STEW Rep.	

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!

<i>Fiscal Year</i>	<i>Recent / Ongoing / Planned Regional Bioaccumulation Monitoring</i>
2020/21	Support for DRMP mercury monitoring (fish tissue).
2021/22	Support for DRMP mercury monitoring (fish tissue), cyanotoxins (water, sediment, and clams; (external funding from Proposition 1 grant), CECs (fish tissue, water, sediment, clams (funded by Delta Regional Monitoring Program).
2022/23	Support for DRMP mercury monitoring (fish tissue), cyanotoxins (water, sediment, and clams; (external funding from Proposition 1 grant), CECs (fish tissue, water, sediment, clams (funded by Delta Regional Monitoring Program).
2023/24	Support for DRMP mercury project report, cyanotoxins (water, sediment, and clams (external funding from Proposition 1 grant).
2024/25	Support for DRMP mercury monitoring (fish tissue), cyanotoxins (water and sediment). Additional mercury monitoring is proposed, although project details are still in development (discretionary & SWAMP funds).

Regional Priorities

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

Triennial Review Year: 2021

[2021 Triennial Review Workplan](#)

The Central Valley Water Board's Triennial Project Prioritization Criteria was developed as part of the 2018 Triennial Review and continued to be implemented with the 2021 Triennial Review. Triennial Review projects are evaluated based on 7 criteria and grouped into categories based on those criteria. The criteria and categories are described in the 2021 Triennial Review Workplan (see link above). Table 5 (starting on page 18) has a list of projects in each category.

Next anticipated Triennial Review Year: 2024 Triennial Review

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):

- Step 1: Add Tribal Beneficial Use definitions to basin plans
- Step 2: Gather information for designations
- Step 3: Designate waterbodies or parts of a waterbody with Tribal Beneficial Use(s)
- Tribal Engagement

On 6 December 2018, the Central Valley Water Board adopted Resolution R5-2018-0079 approving the 2018 Triennial Review with TBU designations as a priority project. At the 18 February 2022 Board Meeting, the Central Valley Water Board adopted the proposed basin plan amendment (BPA) to add the TBU definitions to the Water Quality Control Plans for the Sacramento River and San Joaquin River Basins and Tulare Lake Basin. On 7 September 2022, the State Water Board approved that BPA and on 30 October 2023 Board staff submitted the Administrative Record to the Office of Administrative Law and provided the record publicly. Once approval is received from the Office of Administrative Law, the Administrative Record will be sent to the U.S. Environmental Protection Agency for the final approval.

In response to tribal requests for clarification on the Basin Plan Amendment Process and TBU designations, Board staff developed a [Frequently Asked Questions](#) document as well as a [TBU Basin Planning Primer](#) describing and illustrating the steps needed to designate a waterway with a TBU.

As a commitment to providing government-to-government meetings, the Central Valley Water Board hosted two Tribal Summits in 2021 and hosts semi-annual hybrid meetings to provide project updates to tribes and their representatives as well as to solicit input to incorporate into the Board's approach for TBU designations.

Board staff continue to meet with tribes who submitted TBU designation requests (or plan to) to review their request, discuss evidence submitted, and provide an opportunity to establish continued collaboration. Meetings will continue to be held and offered throughout the TBU designation process.

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): [TMDL and Impaired Water Bodies 303\(d\) List](#)

Region's Upcoming / Planned TMDL(s): See Triennial Review and website listed above.

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.

The Central Valley Regional Water Quality Control Board has a program planning process implemented annually to determine the priority projects and core work for each of the Board's programs, including SWAMP. This Executive Officer proposes a set of priority projects to the Board Members and then work plans are developed to guide the Board's water quality programs annually. The Central Valley Regional Water Quality Control Board establishes longer-term program priorities from the following Board adopted documents:

- (1) The [Central Valley Regional Water Quality Control Board's Strategic Plan](#)
- (2) The [Central Valley Regional Water Quality Control Board's Racial Equity Resolution](#), R5-2022-0067, which includes Goals for each Program
- (3) The Triennial Review (see section above).

The first two above documents are more conceptual and less technical; therefore, they do not directly address bioaccumulation monitoring. The Triennial Review prioritizes TBU designations and Mercury TMDLs and control programs for the Delta (which have a bioaccumulation component) through our Basin Planning and TMDL Programs.

The SWAMP program priority projects have focused on the highest priority water quality issues (based on the processes described above) which includes:

- [Recreational beneficial uses assessments](#)
- Lower American River Bacteria Study and a corresponding [Interactive Online Map](#)
- Harmful algal blooms
- The [Delta Regional Monitoring Program](#)
- The [Sacramento Watershed Coordinated Monitoring Program](#)

More information can be found on the [Central Valley Region SWAMP website](#)

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!

The Central Valley Regional Water Quality Control Board’s program planning process is described above. While SWAMP funds have been allocated to contracts through FY25/26, the final decisions on the focus for these projects will be through the Board’s program planning process described above.

We anticipate there will be bioaccumulation monitoring needs identified by Tribes for the TBU designations. These needs will be prioritized in the Board’s planning for bioassessment monitoring either through the Board’s Basin Planning Program or SWAMP.

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

Fiscal Year	Anticipated Future Regional Bioaccumulation Monitoring
2025/26	Delta Regional Monitoring Program (to be determined), TBU support (details to be determined through discussions with Tribes).
2026/27	TBU support (details to be determined through discussions with Tribes).
2027/28	
2028/29	
2029/30	

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 ...

Note - content below was shared verbally during the meeting and added here after

- Continue engaging with tribes
- Cyanohabs response/monitoring
- River and stream monitoring to understand trends

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.

Generally, a lack of sufficient funding is a roadblock, especially given how geographically extensive the Central Valley Region is.

Having a better understanding of which fish or other aquatic species are of interest to the Tribes would also be insightful so we can plan monitoring or special studies accordingly.

Colorado River Basin Regional Water Quality Control Board (Region 7) Template

Regional Contacts

Contact Type	Contact Name	Email Address
SWAMP Coordinator	Jeff Geraci	Jeff.geraci@waterboards.ca.gov
STEW Representative	Emma McCorkle	Emma.McCorkle@waterboards.ca.gov
FHAB Coordinator	Jeff Geraci	Jeff.geraci@waterboards.ca.gov
Tribal Coordinator	Emma McCorkle	Emma.McCorkle@waterboards.ca.gov
Basin Planning Designee	Ravleen Kaur	Ravleen.Kaur@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	Some bioaccumulation work was done for the New River, Alamo River, All-American Canal, Palo Verde and the CV Storm Channel
2021/22	Some bioaccumulation work was done for the New River, Alamo River, All-American Canal, Palo Verde and the CV Storm Channel
2022/23	Some bioaccumulation work was done for the New River, Alamo River, All-American Canal, Palo Verde and the CV Storm Channel
2023/24	Some bioaccumulation work will be done for the New River, Alamo River, All-American Canal, Palo Verde and the CV Storm Channel
2024/25	Some bioaccumulation work will be done for the New River, Alamo River, All-American Canal, Palo Verde and the CV Storm Channel

Regional Priorities

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

Triennial Review Year: 2023

Twelve of the 26 Triennial Review priorities are concerning Salton Sea, while 13 priorities are TMDL actions.

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

1. Salton Sea Watershed, Alamo River Chloride, Indicator Bacteria, and Toxicity TMDLs
2. Salton Sea Watershed, New River Ammonia and Toxicity TMDLs
3. Salton Sea Dissolved Oxygen and Nutrients TMDLs

Next anticipated Triennial Review Year: 2026

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): Step 1: Add Tribal Beneficial Use definitions to basin plans

No tribes have indicated waterbodies to designate.

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):

- Imperial Valley Organophosphate and Organochlorine Compounds TMDLs

Region's Upcoming / Planned TMDL(s):

- Imperial Valley Pyrethroid Pesticides TMDLs
- Alamo River Chloride, Indicator Bacteria, and Toxicity TMDLs
- Salton Sea Dissolved Oxygen and Nutrients TMDLs.

Additional Notes and/or Resources: These TMDLs are being implemented by our Irrigated Lands General Orders which include water and fish tissue monitoring.

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.

We use our SWAMP monitoring to make sure that we have at least yearly data on impairments. This is likely to continue as we are the main agency that monitors water quality in this region.

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	Some bioaccumulation work will be done for the New River, Alamo River, All-American Canal, Palo Verde and the CV Storm Channel
2026/27	Some bioaccumulation work will be done for the New River, Alamo River, All-American Canal, Palo Verde and the CV Storm Channel
2027/28	Some bioaccumulation work will be done for the New River, Alamo River, All-American Canal, Palo Verde and the CV Storm Channel
2028/29	Some bioaccumulation work will be done for the New River, Alamo River, All-American Canal, Palo Verde and the CV Storm Channel
2029/30	Some bioaccumulation work will be done for the New River, Alamo River, All-American Canal, Palo Verde and the CV Storm Channel

Additional Notes and/or Resources:

Since we are a desert region, we have a small number of perennial surface waters that are impaired. Because of that, our efforts are focused on those waters. We also have limited access to sampling and utilize our semi-annual samplings to provide the bulk of our monitoring data including fish tissue.

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 ...

Additional bioaccumulation monitoring would be beneficial in the Salton Sea and the Colorado River. These two waterbodies have the most use by the public and therefore the highest contact levels.

It would also be beneficial to increase the bioaccumulation monitoring to include upstream sites of the waters that we already sample. We know that impairments are present at the outlets, but there isn't enough data to increase our knowledge of what parts of the rivers are contributing the most.

We would also benefit from additional PYs to catalog and analyze data for TMDL implementation and permit enforcement.

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.

We lack resources for additional monitoring. Additional funding, PYs, and a more local sampling team would go a long way to increase our monitoring and analysis. Our office is small but our water quality issues are large and complex. Our region's economy is driven by tourism and agriculture, these two things are at odds from a water quality perspective. An increase in staff and funding would allow us to track problem areas and work on solutions with dischargers.

Santa Ana Regional Water Quality Control Board (Region 8) Template

Regional Contacts

Contact Type	Contact Name	Email Address
SWAMP Coordinator	Heather Boyd	Heather.Boyd@waterboards.ca.gov
STEW Representative	Terri Reeder	Terri.Reeder@waterboards.ca.gov
FHAB Coordinator	Kirk Larkin	Kirk.Larkin@waterboards.ca.gov
Tribal Coordinator	Claudia Tenorio	Claudia.Tenorio@waterboards.ca.gov
Basin Planning Designee	Claudia Tenorio	Claudia.Tenorio@waterboards.ca.gov
Other:	Jagroop Khela	Jagroop.Khela@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!

<i>Fiscal Year</i>	Recent / Ongoing / Planned Regional Bioaccumulation Monitoring
2018/19	Contributed \$2,201 for SWB_FishCoast_2018
2019/20	Contributed \$5,000 for SWB_FishCoast_2018
2020/21	
2021/22	
2022/23	
2023/24	Depending on resources available, may contribute funds to augment analyses of fish tissue collected from Region 8 lakes in 2023.
2024/25	

Regional Priorities

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

Triennial Review Year: Tentative 2024-2027

The 2024-2027 Triennial Review has not been adopted yet; however, these are the anticipated top three priorities.

Top 3 Triennial Review Work Plan Priorities:

1. BPA to revise Lake Elsinore and Canyon Lake Nutrient TMDLs
2. BPA Wet Weather Compliance Extension Date for MSAR TMDL
3. Adopt Cu TMDLs for Newport Bay

Next anticipated Triennial Review Year: 2024-2027

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
- Ongoing Step: Prioritize Tribal Beneficial Uses in triennial reviews
- Step 1: Add Tribal Beneficial Use definitions to basin plans
- Step 2: Gather information for designations
- Step 3: Designate waterbodies or parts of a waterbody with Tribal Beneficial Use(s)

The addition of the Tribal and Subsistence Beneficial Uses is identified as a priority as part of the tentative 2024-2027 Triennial Review. As part of this step, staff will begin consultations with tribes and other interested parties about possible designations for CUL, T-SUB, and SUB.

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) (only TMDLs for bioaccumulative compounds listed):

- Newport Bay Watershed Organochlorine Compounds TMDL
- Newport Bay Watershed Selenium TMDLs for Freshwater

Region's Upcoming / Planned TMDL(s): N/A

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.

TBD

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	\$70K set aside for BOG funds for field work and lab analyses -TBD
2026/27	
2027/28	
2028/29	
2029/30	

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 ...

- **Microcystin in Fish Tissue in Lake Elsinore**
 - What are the microcystin concentrations in fish tissue in Lake Elsinore?
 - Microcystin has been shown to bioaccumulate in fish (Shahmohamadloo et al. 2022).
 - What fish do people consume at Lake Elsinore?
 - Shahmohamadloo et al. 2022 also showed the microcystin concentrations vary by species. This is why we need to better understand what fish species are being consumed at Lake Elsinore and what species have the potential to bioaccumulate microcystin. Those species that overlap should be the target species.
 - The same study showed that microcystin concentrations accumulated at higher concentrations in the liver than the muscle. Therefore, it is also important to understand what parts of the fish people who are fishing at Lake Elsinore eat.

- **PCBs and DDT in Lake Elsinore**
 - During the 2024 Integrated Report response to comments, stakeholders commented that Lake Elsinore should be delisted for PCBs and DDT. They stated that data from a 2018 fisheries survey in Lake Elsinore was sufficient to

delist. However, the 2019 study included bluegill and channel catfish, species that were not previously sampled and species that were not included in the original basis for placement on the 303(d) list. Additionally, only one sampling event is not sufficient to justify using section 4.10 Trends in Water Quality from the Listing Policy. One of the requirements in using the trends section of the listing policy is the requirement to use data collected for at least three years and to establish baseline conditions.

- Including Lake Elsinore for PCBs and DDT and targeting bluegill and catfish species would potentially give us additional data to justify delisting next time Region 8 is on-cycle for the Integrated Report.
- **Fish consumption habits and patterns in Region 8**
 - Conduct fish consumption surveys to understand the fish consumption habits and patterns of disadvantaged communities and other marginalized groups that may be at risk of consuming bioaccumulative compounds.
 - Specific areas of interest are: Newport Pier, lakes/rivers in disadvantaged communities.
- **PFAS chemicals of concern in fish tissue and invertebrates**
 - Use past PFAS investigations of sites as well as groundwater and ambient water datasets to target areas with likely issues related to these “forever chemicals”.
 - Specific areas of interest are: Temescal Creek, Santa Ana River Reach 3 and 2 (below Prado Dam), Peters Canyon Wash, and San Diego Creek. Lakes might include Prado Park Lake, Lake Elsinore, Big Bear Lake. Bays/estuaries of interest: Huntington Harbour/Anaheim Bay.
 - Look at higher trophic level fish (e.g., bass, as well as invertebrates (e.g, crayfish and mussels)
 - Based on results of fish tissue, then look at chemicals in bird eggs in coordination with USFWS to understand biomagnification in the food chain.
 - Issues – State Board and regulation of these chemicals, e.g. classes or groups, not each individually. Broad spectrum testing. No tissue thresholds for CA.
- **Selenium in Newport Coast streams**
 - Screen for selenium in ambient water samples from Buck Gully, Los Trancos, Morning Canyon, and other Newport Coast streams as needed.
 - If selenium is found at actionable levels in the water column, then conduct water column speciation analyses and/or food web studies (collection of tissue and or bird eggs).
- **Huntington Harbour and Bolsa Bay and impacts of DDx on avian species.**
- **Revisit waterbodies with old 303(d) listings without newer data:**
 - Anaheim Bay (PCBs)-exceedances noted in mussels and fish tissue (fish species not identified)
 - Balboa Beach (PCBs, DDT, Dieldrin –exceedances noted in Walleye Surfperch, Shiner Surfperch for Dieldrin and DDT)

- Huntington Beach State Park (PCBs -shiner surfperch, yellowfin croaker, black surfperch, and kelp bass)- included sampling from Emma Oil Platform, Huntington Beach Pier, and Huntington Beach
- Huntington Harbour (PCBs –tissue type and species not identified)
- Seal Beach (PCBs-white croaker and yellowfin croaker)
- These waterbodies were primarily first listed in 2006 or earlier using data collected under the Toxic Substances Monitoring Program (TSMP) and the State Mussel Watch Program (SWMP).
- Data collected from the BOG 2018/So Cal Bight 2018 included fish collected from specific zones (Zone 11- Crystal Cove to Santa Ana River, Zone 13-Santa Ana River to Seal Beach, Zone 14- Orange County Oil Platforms) that incorporate the waterbodies above. However, those data, if assessed, did not change the listing status.

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.

SWAMP funding has remained at the same levels for many years, while other costs have increased. Tissue collection and analyses are expensive, and specialized, which has led to sampling at fewer sites, and reduced tissue analyses. Our region is small area-wise, but is very urbanized with a population of over 6 million, which puts tremendous pressure on natural resources. Staff resources are limited as is the time it takes to develop expertise in various subject areas. Knowledge of effects of chemicals of concern, such as microplastics, cyanotoxins, PFAS, on bioaccumulation and aquatic life is constantly changing due to emerging research and findings. To keep our program evolving it is important to stay current with the newest science to make good decisions about what to fund.