

Tribal Workshop: Draft Staff Report for Sacramento/Delta Update to the Bay-Delta Water Quality Control Plan (Bay-Delta Plan)

November 9, 2023



State Water Resources Control Board

Agenda

- Introductions
- State Water Resources Control Board (State Water Board or Board) Staff Presentation on Draft Staff Report
- Question and Answer Session on Draft Staff Report
- Harmful Algal Blooms (HABs) Presentation and Question and Answer Session

Workshop Logistics

- To ask questions:
 - Zoom: raise your hand and unmute yourself when it is your turn to speak
 - Phone: press *9 to raise and lower your hand | *6 to unmute yourself
- Email SacDeltaComments@waterboards.ca.gov for assistance
- Purpose of workshop is to provide information on draft Staff Report and answer questions to facilitate public comments at hearing/in writing
- Comments requested at upcoming hearing before the full Board

Presentation Outline

- Background on State Water Board and Bay-Delta Plan
- Overview of draft Staff Report for Sacramento/Delta Update to the Bay-Delta Plan
 - Alternatives evaluated in draft Staff Report
 - Organization of draft Staff Report
 - Structure of environmental impact analyses
 - Documentation of tribal and traditional ecological knowledge (TEK)
 - Consideration of incorporation of tribal and subsistence beneficial uses (TBUs) to the Bay-Delta Plan
- Next steps, schedule, and resources

Engagement with California Native American Tribes

- The Board appreciates input provided by California Native American tribes to date and looks forward to additional input on the draft Staff Report
- Past tribal engagement includes:
 - January 2023: EO B-10-11 letters offering formal consultation on the update and implementation of the Bay-Delta Plan
 - March and May 2023: Tribal listening sessions on Bay-Delta Plan update and implementation processes
 - June 2023: Board Informational Item on consideration of incorporation of TBUs to the Bay-Delta Plan
 - Meetings and discussions with tribes
- Staff is committed to ongoing engagement with tribes to incorporate TEK, tribal feedback and perspectives into the Bay-Delta Plan to inform the reasonable protection of beneficial uses and TBUs that are under consideration

State Water Board

- Mission – To preserve, enhance, and restore the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use, for the benefit of present and future generations
- Responsible for allocating surface water rights and protecting water quality, while protecting the public trust and public interest and preventing the waste and unreasonable use of water
- Responsibilities converge in the Bay-Delta

Bay-Delta Plan

- Identifies beneficial uses of water, water quality objectives to protect those uses, a program of implementation to achieve the objectives, and monitoring and special studies
 - Beneficial uses: municipal and industrial, agricultural, fish and wildlife
 - Water quality objectives: narrative and numeric (primarily flow-dependent)
 - Program of implementation: flow and nonflow actions
 - Monitoring and evaluation to assess compliance and effectiveness of implementation actions

Bay-Delta Plan Relationship to Regional Water Board Basin Plans

- Bay-Delta Plan overlays two Basin Plans:
 - Water Quality Control Plan for the Sacramento and San Joaquin River Basins developed by the Central Valley Regional Water Quality Control Board (Regional Water Board)
 - Water Quality Control Plan for the San Francisco Bay Region developed by the San Francisco Bay Regional Water Board
- Regional Water Boards focus on National Pollutant Discharge Elimination System (NPDES) and Waste Discharge Requirements (WDR)
- All three plans are intended to be complimentary to one another and require periodic/triennial review

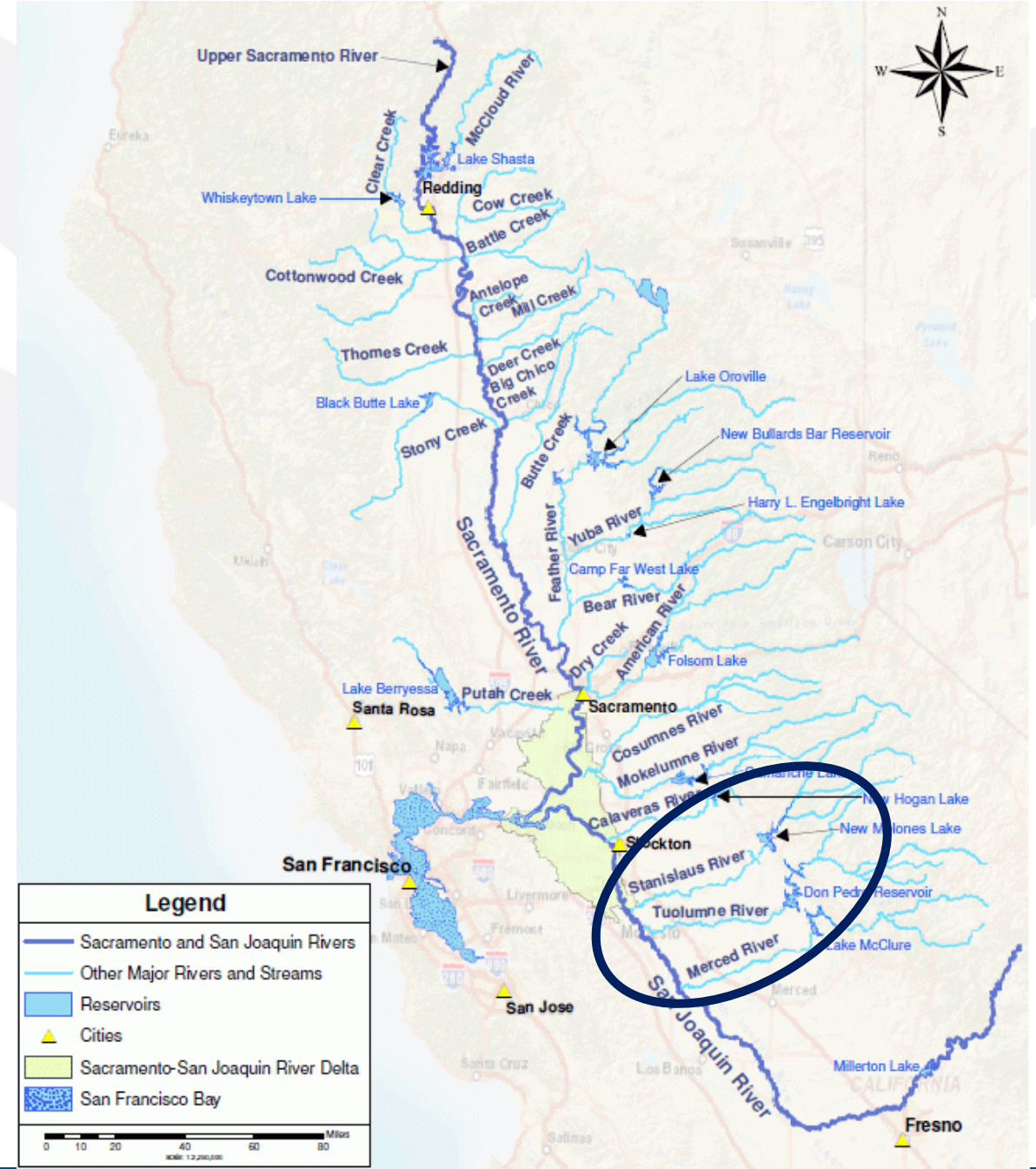
San Francisco Bay/ Sacramento-San Joaquin Delta (Bay-Delta) Watershed

Bay-Delta Plan Updates



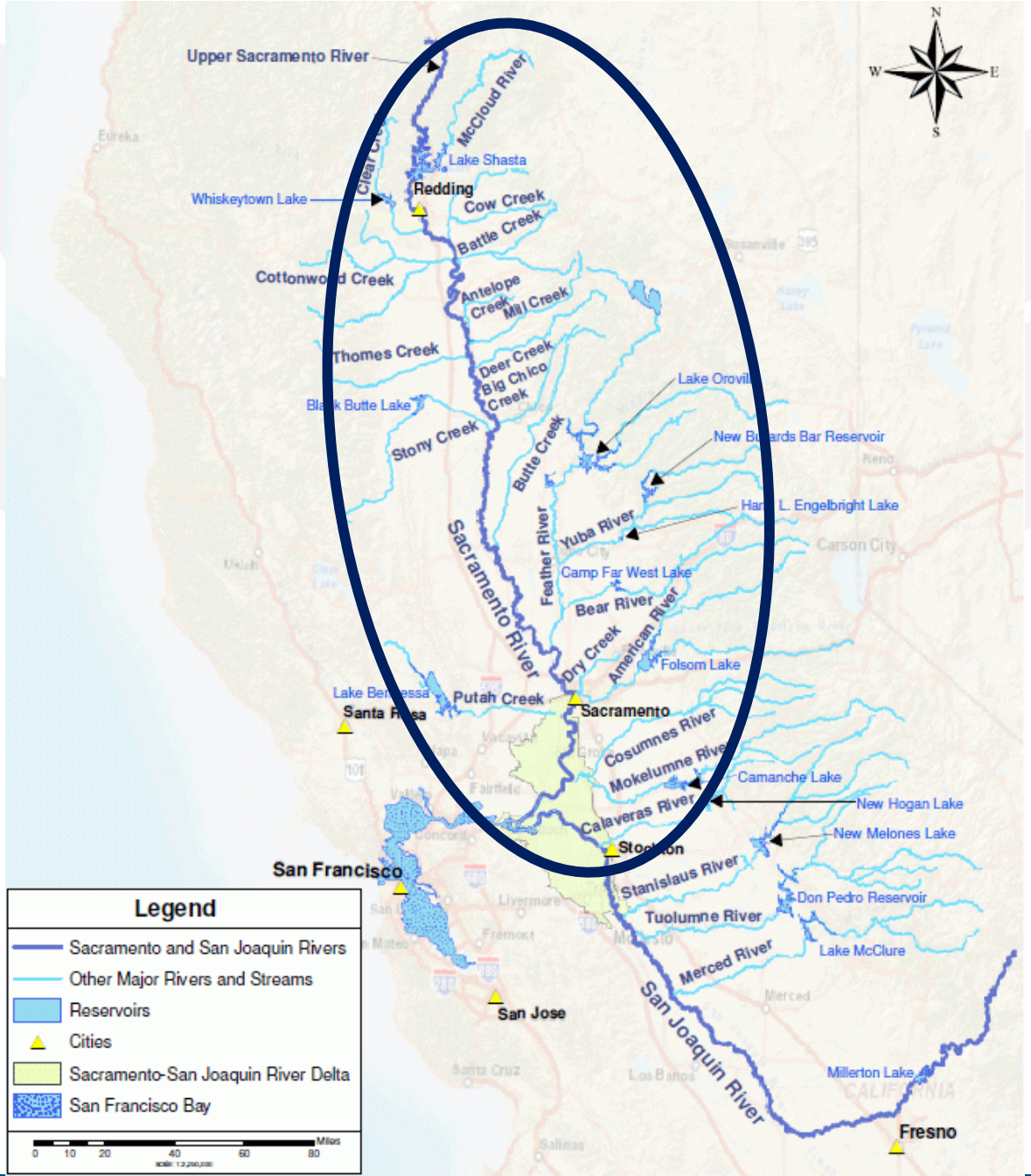
Bay-Delta Watershed

Lower San Joaquin River Flow/ Southern Delta Salinity (LSJR/SD) Updates to the Bay-Delta Plan



Bay-Delta Watershed

Sacramento/Delta Update to the Bay-Delta Plan



Purpose of Updates to the Bay-Delta Plan

- Native species have undergone substantial population declines
- Aquatic ecosystem stressors:
 - Flow alteration
 - Habitat loss
 - Water quality
- Bay-Delta Plan updates are intended to establish flow and related measures to protect native species
- Those measures are then implemented through subsequent water right/water quality actions



Sacramento/Delta Update Background

- 2012: Supplemental Notice of Preparation
- 2012-2016: Workshops and public meetings to inform Sacramento/Delta updates to the Bay-Delta Plan and draft Scientific Basis Report development
- 2017: Peer-reviewed Scientific Basis Report completed
 - Evaluates Sacramento and Delta tributary (Mokelumne, Cosumnes, and Calaveras) inflows and cold-water habitat, Delta outflows, and interior Delta flows
- 2018: Framework for possible Sacramento/Delta updates to the Bay-Delta Plan

Proposed Plan Amendments

- Possible Sacramento/Delta changes to Bay-Delta Plan identified in 2018 Framework referred to as “proposed Plan amendments”
 - Year-round inflows of 55% of unimpaired inflows with an adaptive range from 45-65% that would apply to Sacramento River and Delta (Mokelumne, Cosumnes, Calaveras) salmon bearing tributaries
 - Narrative cold water habitat objective and implementation measures
 - Year-round inflow-based Delta outflows that would provide for required inflows as outflows
 - Interior Delta flows to avoid export related impacts
 - Science, monitoring, evaluating, reporting and other provisions
- Board has not decided on changes to the Bay-Delta Plan, which will be informed by public comments and other information

Recent Sacramento/Delta Update Activities

- 2022: Proposed Voluntary Agreements (VAs)
 - Proposed by water users, the Secretaries of the CA Natural Resources Agency and Environmental Protection Agency, and U.S. Bureau of Reclamation
 - Propose flow and habitat restoration actions
 - Proposed strategic planning, governance, science, and adaptive management programs
- 2023: Draft Scientific Basis Report Supplement for proposed Sacramento/Delta VAs
 - Documents science supporting Sacramento/Delta provisions of proposed VAs
 - Supplements 2017 Scientific Basis Report
 - Revised based on public input and included as appendix to draft Staff Report and submitted for independent scientific peer review
- September 2023: Draft Staff Report in support of Sacramento/Delta updates to the Bay-Delta Plan

Proposed VAs

- Propose flow, habitat restoration, and other actions on Sacramento, Feather, American, Yuba, and Mokelumne Rivers, Putah Creek, and in Delta
- Propose: (1) a new narrative objective to achieve viability of native fish populations, and (2) to provide participating parties' share to contribute to achieving the existing narrative objective to double salmon populations by 2050
- Initial 8-year term proposed, following which VAs could be extended or modified, or regulatory pathway could apply if proposed VAs are not found to be effective
- Draft Staff Report identifies proposed regulatory pathway consistent with the inflow, outflow, and cold water habitat provisions of 2018 Framework, assumes pathway applies to non-VA regions, and applies if VAs not continued after initial implementation

Comparison of Proposed Plan Amendments and Proposed VAs

- Proposed Plan Amendments and Proposed VAs not directly comparable
 - Proposed Plan amendments would apply to Sacramento River and Delta (Mokelumne, Cosumnes, Calaveras) salmon bearing tributaries and would require year-round inflows of 55% of unimpaired flows with an adaptive range from 45-65%
 - Proposed VAs include a combination of flow and non-flow habitat restoration measures on a portion of the Sacramento/Delta tributaries over 8 years, including varying amounts of increased flows depending on water year type
- Model results provided in Chapters 6 and 9 of the draft Staff Report

Evaluation of Fish Benefits

- Benefits evaluated in Scientific Basis Report and Supplement
- Salmonid Tributary Habitat Analysis (Section 3.14.2, Salmonid Habitat Analyses, Section 9.6, Beneficial Env Effects)
 - SacWAM flows plus physical habitat restoration
 - Suitability Criteria
 - Floodplain Evaluation
- Estuarine Habitat Analysis (Section 9.6, Beneficial Env Effects)
- Flow Abundance Relationships (Section 3.14.1, Species Protection, Section 9.6, Beneficial Env Effects)
- Qualitative Assessments

Draft Staff Report

- Evaluates potential benefits and environmental/economic impacts of possible alternatives for updating the Sacramento/Delta components of the Bay-Delta Plan
- Assesses a range of alternatives, including proposed Plan amendments, proposed VAs, and others
- Identifies proposed incorporation of tribal and subsistence fishing beneficial uses to the Plan
- Complies with California Environmental Quality Act, Water Code, and other laws
- Public's opportunity to review and comment on analyses
- Public input will inform the State Water Board's planning process and eventual consideration of adoption of Sacramento/Delta updates

Draft Staff Report Alternatives

- See Section 7.2, *Alternatives Description*
- Stand-Alone Alternatives:
 - Proposed Plan Amendments (based on 2018 Framework)
 - Low Flow Alternative – same as Proposed Plan Amendments but inflows of 35-45%
 - High Flow Alternative – same as Proposed Plan Amendments but inflows of 65-75%
 - Collectively Proposed Plan Amendments, Low, and High Flow Alternatives referred to as “Flow Alternatives”
 - Proposed VAs (based on VA MOU)
 - No Project Alternative
- Modular Alternatives:
 - Interior Delta Flow and Fall Delta Outflow Variations
 - Drought Alternatives
 - Protection of VA Flows Alternative
- State Water Board has not yet made any decisions on how to move forward, and all alternatives are available for consideration

Organization of Draft Staff Report

- Chapter 1: Executive Summary
- Chapter 2: Hydrology and Water Supply
- Chapter 3: Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations
- Chapter 4: Other Aquatic Ecosystem Stressors
- Chapter 5: Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta
- Chapter 6: Changes in Hydrology and Water Supply
- Chapter 7: Environmental Analysis
- Chapter 8: Economic Analysis and Other Considerations
- Chapter 9: Proposed Voluntary Agreements
- Chapter 10: Economically Disadvantaged Communities
- Chapter 11: Tribal Engagement
- Chapter 12: Public Participation
- Appendices (Modeling results, Scientific Basis Report, VA Scientific Basis Report Supplement, VA MOU and other draft VA components)

Environmental Impact Analyses

- Changes in hydrology
 - Magnitude and timing of tributary flows, Delta inflows, and Delta outflows; reservoir levels; interior Delta flows
- Changes in water supply
 - Sacramento/Delta supplies
 - Agricultural, municipal, and wildlife refuge supplies
 - Groundwater
 - Other water management actions
 - Groundwater storage and recovery, water transfers, water recycling, and water conservation measures
- Habitat restoration and other ecosystem projects
- New or modified facilities
- Impact summary tables: Tables 1-1, 1-2, 7.21-1, 7.22-2, Appendix F

Traditional Ecological Knowledge (TEK)

- Staff Report includes initial documentation of TEK and traditional resource management strategies of tribes within the Bay-Delta watershed
- Chapter 11, 5 and the 2023 Scientific Basis Report Supplement documents TEK of tribes in the Bay-Delta watershed and its tributaries from several sources:
 - Literature review
 - TEK shared during Board TBU Informational Item
 - TEK shared during meetings with Bay-Delta tribal representatives
- Knowledge from literature review is limited; requesting additional tribal input on documentation and use of TEK in planning and implementation for the Bay-Delta Plan

TEK and Bay-Delta Plan Update and Implementation

- Tribes and culturally significant aquatic resources have been impacted by aquatic ecosystem stressors
- Clean water, functional flows, and healthy fish and wildlife populations are critical to sustaining tribal communities
- The draft Staff Report describe how tribal knowledge and resource management practices may inform possible components of the Bay-Delta Plan:
 - Adaptive implementation of flows
 - Habitat restoration
 - Monitoring activities
 - Future changes to the Bay-Delta Plan and its implementation

Tribal and Subsistence Fishing Beneficial Uses (TBUs)

- Established and defined by the Board in 2017 in collaboration with California Native American tribes and the public
- Tribal Tradition and Culture (CUL) – uses of water that support the cultural, spiritual, ceremonial, or traditional rights or lifeways of California Native American Tribes
- Tribal Subsistence Fishing (T-SUB) – uses of water involving the non-commercial catching or gathering of natural aquatic resources for consumption by individuals, households, or communities of California Native American Tribes to meet needs for sustenance
- Subsistence Fishing (SUB) – uses of water involving the non-commercial catching or gathering of natural aquatic resources, including fish and shellfish, for consumption by individuals, households, or communities, to meet needs for sustenance

Consideration of Incorporation of TBUs

- Incorporation of TBUs would provide for explicit recognition of reasonable protection of these beneficial uses within the context and purview of the Bay-Delta Plan
- Incorporation of the TBU definitions into the Bay-Delta Plan is not proposed as a formal “designation” of the uses as applying to specific waterbodies or waterbody segments within the Bay-Delta
- Additional work and collaboration needed among tribes, State Water Board, and Regional Water Boards to define the proper scope and identify the effects of formal designations as applicable to the geographical area of the Bay-Delta watershed
- See Chapter 11, *Tribal Engagement*

HABs and Invasive Aquatic Vegetation

- HABs reported at multiple locations within Sacramento/Delta watershed under existing conditions, including lakes/reservoirs, canals, riverine locations, as well as within the Delta
- Increased flows in spring could reduce HAB formation and invasive aquatic vegetation in the Delta
- Reduced Delta inflows in summer and fall could result in increased production of HABs and invasive aquatic vegetation in some Delta channels at some times
- Lower reservoir levels could lead to shallower, warmer, more stable water column conditions in some reservoirs, which could increase HABs
- Changes in hydrology would be less under the proposed VAs than the proposed Plan amendments, so HAB related impacts of the proposed VAs would likely be more similar to baseline
- Draft Staff Report identifies several mitigation measures that could be implemented to reduce or avoid HAB-related water quality impacts

Delta HABs Actions

- Uncertainty in the specific drivers of HABs in the Delta result in uncertainty in the potential impacts or benefits of the proposed Plan amendments or the proposed VAs
- Need better information on the drivers of HABs, including the effects of flow and water project operations
- Program of implementation includes commitments by Board to work with other agencies and stakeholders to better understand HABs to inform actionable control mechanisms
- Board has started on these efforts by funding research into HABs drivers and development of a HABs monitoring design
- Seeking tribal input to inform strategy development

Draft Staff Report: Additional Resources

- Additional resources available on State Water Board website:
 - Video Recordings: public workshops held on October 19 and November 2
 - Video Tutorial: Overview of Sacramento/Delta Update to Bay-Delta Plan and Draft Staff Report
 - Frequently Asked Questions on Draft Staff Report
- Staff available to meet with tribal representatives to answer additional questions on draft Staff Report
- Government-to-government consultations can be arranged at the request of tribal leadership

Comment Opportunities on Draft Staff Report

- **To provide verbal comments on draft Staff Report:** attend public hearing (scheduled for November 17, December 1, and December 11)
- **To submit written comments on draft Staff Report:** email comments to SacDeltaComments@waterboards.ca.gov with the subject “Comment Letter – Sacramento/Delta Draft Staff Report”
- **Seeking input on:**
 - Further incorporation of TEK
 - Program of implementation for Proposed Plan Amendments and Proposed VAs
 - Habitat restoration under Proposed Plan Amendments and Proposed VAs
 - Cultural resource impacts and mitigation measures (including construction)
 - Tribal Beneficial Uses
 - Other improvements to draft Staff Report

Anticipated Timeline

- **Fall 2023:** VA Scientific Basis Report Supplement Report submitted for independent scientific peer review
- **Late 2023:** VA parties submit additional draft components of VA proposal (flow accounting, various agreements, governance charter) to the Board and for public review
- **Early to Mid 2024:** Release specific draft changes to Bay-Delta Plan, including program of implementation language, for public review and comment, and hold public meeting
- **Late 2024:** Develop responses to public comments on draft Staff Report and any needed changes to Staff Report and proposed changes to the Bay-Delta Plan for Board consideration
- **Late 2024:** Board meeting to consider adoption of Sacramento/Delta updates to Bay-Delta Plan and final Staff Report

Resources and Contact Information

Rob McCarthy, Tribal Coordinator for Bay-Delta Plan Update and Implementation Processes:

Robert.McCarthy@waterboards.ca.gov

Webpages:

Bay-Delta Tribal Coordination:

www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/tribal_coordination.html

Sacramento/Delta Update:

www.waterboards.ca.gov/bay_delta/comp_review.html

Bay-Delta Watershed:

www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/

Bay-Delta Notices

Email Subscription List:

www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/



Stay informed

Email Subscription List

Subscribe to the Bay Delta Notices email topic to receive notifications and the latest updates.

*Email Address

Submit

Question and Answer Session

- **To ask questions:**
 - Zoom: raise your hand to ask question verbally
 - Phone: press *9 to raise and lower your hand
- Email SacDeltaComments@waterboards.ca.gov for assistance

Tribal Workshop: Approaches to Address Harmful Algal Blooms in the Delta

November 9, 2023



Logistics and Purpose

- Workshop is being recorded and will be available on the Bay-Delta webpage: bit.ly/sac-delta-update
- **To ask questions:**
 - Zoom: submit questions using chat function or raise your hand to ask question verbally
 - Phone: press *9 to raise and lower your hand
- Email SacDeltaComments@waterboards.ca.gov for assistance
- Purpose of presentation is to provide background on Harmful Algal Blooms (HABs) discussion in the Draft Staff Report and on the Delta Cyanobacterial HAB Monitoring Strategy
- Answer questions to facilitate public comments on HABs content in the Draft Staff Report and on the Delta Cyanobacterial HAB Monitoring Strategy

Submitting Comments on Draft Staff Report

- Participants should reserve comments for public hearing, where Board members will be in attendance, and for the written comment period
- **To provide oral comments:** attend public hearing (scheduled for November 17, December 1, and December 11)
- **To submit written comments:** email comments to SacDeltaComments@waterboards.ca.gov with the subject “Comment Letter – Sacramento/Delta Draft Staff Report” by December 15, 2023
- Additional information available in September 28, 2023 Notice: https://www.waterboards.ca.gov/board_info/calendar/docs/2023/notice-sacdeltastffrpt-092823.pdf

Presentation Overview

- Background on Harmful Algal Blooms (HABs) in the Bay-Delta watershed
- Discussion of HABs in Draft Staff Report
- Delta Cyanobacterial HAB Monitoring Strategy
- Upcoming opportunities to provide feedback on Delta Cyanobacterial HAB Monitoring Strategy
- State Water Board Coordination on Delta Cyanobacterial HAB Monitoring Strategy
- Q&A Session

Background on Harmful Algal Blooms in the Bay-Delta watershed

- Harmful Algal Blooms (HABs) are algae or cyanobacteria growths that can impact water bodies and cause serious harm to people, animals, and aquatic life that contact or ingest water containing HABs
- HABs reported at multiple locations within Sacramento/Delta watershed under existing conditions, including in multiple lakes and reservoirs, canals, and riverine locations, as well as within the Delta
- Through the process of updating the Bay-Delta Plan, the State Water Board has heard concerns about how flow and water quality changes are contributing to HABs in the Delta

Discussion of Harmful Algal Blooms in Draft Staff Report

- Chapter 4: Background information about HABs
- Chapter 5: Delta HABs Actions by the State Water Board and other entities
 - Including Delta Cyanobacterial HAB Monitoring Strategy
- Section 7.12.1: HABs Impacts Analysis and Mitigation Measures
- Section 9.7.12.1: HABs Impacts Analysis for the Proposed VAs

Harmful Algal Blooms and Invasive Aquatic Vegetation

- Increased flows in spring could lead to reduced HAB formation and invasive aquatic vegetation in large portions of the Delta
- Reduced Delta inflows in summer and fall could result in increased production of HABs and invasive aquatic vegetation in some Delta channels at some times
- Lower reservoir levels could lead to shallower, warmer, more stable water column conditions in some reservoirs, which could increase the production of HABs
- Changes in hydrology would be less under the proposed VAs than the proposed Plan amendments, so HAB related impacts of the proposed VAs would likely be more similar to baseline
- Draft Staff Report identifies several mitigation measures that could be implemented to reduce or avoid HAB-related water quality impacts

Delta HABs Actions

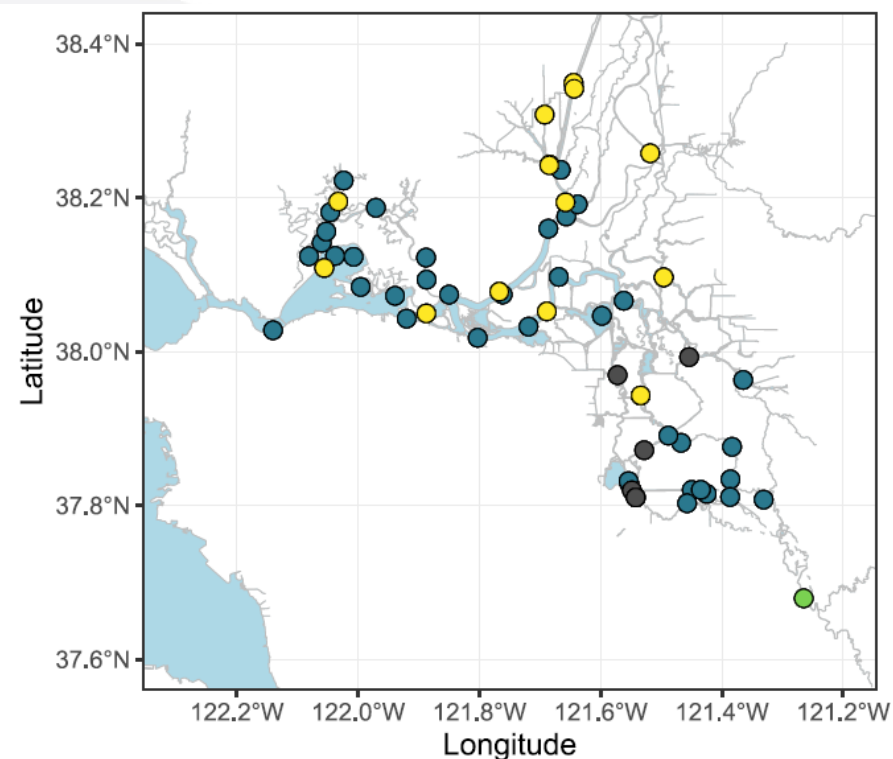
- Uncertainty in the specific drivers of HABs in the Delta result in uncertainty in the potential impacts or benefits of the proposed Plan amendments or the proposed VAs
- Need better information on the drivers of HABs, including the effects of flow and water project operations
- Program of implementation proposed to include commitments by Board to work with other agencies and stakeholders to better understand HABs to inform actionable control mechanisms
- Board has started on these efforts by funding research into HABs drivers and development of HABs monitoring designs
- Board is coordinating with Delta Science Program and others on helping implement the Delta Cyanobacterial HAB monitoring strategy

Delta Cyanobacterial HAB Monitoring Strategy

- At the request of the Central Valley Regional Water Board and California Department of Fish and Wildlife, the Delta Stewardship Council – Delta Science Program is leading the effort to create a community-oriented approach to HABs monitoring
- Fall 2022 community workshop hosted by the Delta Stewardship Council
- Led by Ellen Preece (DWR), Mine Berg (ESA), Tricia Lee (DSC), and Karen Odkins (CDFW)
- Intended to guide the development of a coordinated Delta-wide monitoring program that could improve understanding of HABs and help identify possible management and mitigation measures

Motivation for Developing a Delta Cyanobacterial HAB Monitoring Strategy

- Current Delta HAB monitoring is not adequately coordinated
- Important variables include nutrients, temperature, and water residence time
- We lack detailed information about HAB status and trends and drivers
- This knowledge is needed to forecast, manage, and mitigate HABs



Agency Name

- DWR
- DWR/USBR
- USGS
- USGS/DWR

Goals of Delta Cyanobacterial HAB Monitoring Strategy

- Goal 1: Develop a framework to support Delta Cyanobacterial HAB collaboration
- Goal 2: Prioritize management questions and develop monitoring goals and objectives
- Goal 3: Develop a Cyanobacterial HAB monitoring program
- Goal 4: Develop collaborative reporting protocols
- Goal 5: Create a data sharing platform for water quality management

Upcoming opportunities to provide feedback on Delta Cyanobacterial HAB Strategy

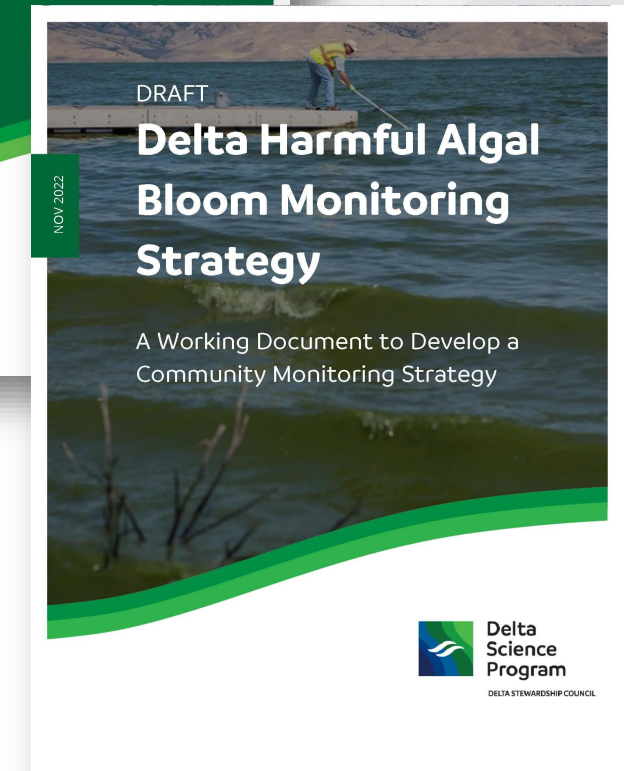
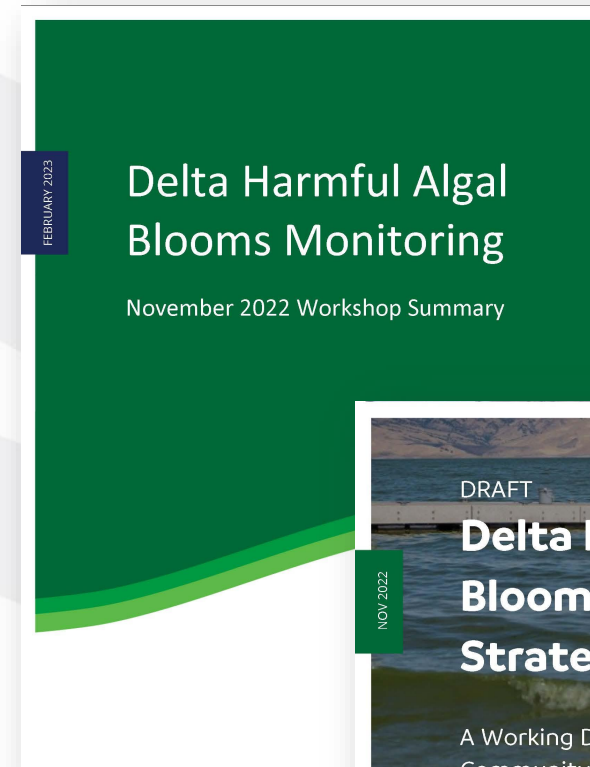
- Feedback we're seeking from tribes at this time:
 - Geographic regions of interest for HAB monitoring
 - Information needs for monitoring and managing HABs
 - Input on management questions
- Workgroup meetings for community collaboration beginning January 2024
 - Discussion will center around management questions
- Public release draft and comment period expected Spring 2024
- If you have comments or questions regarding the Delta Cyanobacterial HABs Strategy reach out to **tribal.liaison@deltacouncil.ca.gov** for more information and to be included in future meetings

For More Information

- Workshop Summary Released
- Forthcoming Monitoring Strategy
- Email tribal.liaison@deltacouncil.ca.gov to obtain more updates



bit.ly/DSPResearchGate



State Water Board Coordination on Delta Cyanobacterial HAB Monitoring Strategy

- Funding development of Delta Cyanobacterial HAB monitoring designs, in support of Strategy Goal #3
- Monitoring designs will be guided by priority management questions identified through tribal and community input on Delta Cyanobacterial HAB Monitoring Strategy
- Monitoring designs will provide different options to implement a coordinated Delta-wide HAB monitoring program depending on resource availability
- For more information about HAB monitoring designs, Email **laura.twardochleb@waterboards.ca.gov**

Resources and Contact Information about Bay-Delta Plan

Rob McCarthy, Tribal Coordinator for Bay-Delta Plan Update and Implementation Processes:

Robert.McCarthy@waterboards.ca.gov

Webpages:

Bay-Delta Tribal Coordination:

www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/tribal_coordination.html

Sacramento/Delta Update:

www.waterboards.ca.gov/bay_delta/comp_review.html

Bay-Delta Watershed:

www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/

Bay-Delta Notices

Email Subscription List:

www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/



Stay informed

Email Subscription List

Subscribe to the Bay Delta Notices email topic to receive notifications and the latest updates.

*Email Address

Submit

Question and Answer Session

- **To ask questions:**
 - Zoom: raise your hand to ask question verbally or type your question into the chat
 - Phone: press *9 to raise and lower your hand
- Email SacDeltaComments@waterboards.ca.gov for assistance