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San Francisco Bay Regional Water Quality Control Board

Triennial Review 2024 Staff Report

May 2025

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Appendix D – 2024 Triennial Review Announcement and Information about Online Survey Form

1. Introduction

This Staff Report presents the results of the 2024 Triennial Review of the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The report includes a listing of proposed Basin Plan projects that may be investigated by San Francisco Bay Regional Water Board (Water Board) staff and addressed through Basin Plan amendments proposed for Water Board consideration over the next three years starting in fiscal year 25/26 and ending in 27/28.

The Basin Plan is the master policy document that contains descriptions of the legal, technical, and programmatic bases of water quality regulation in the San Francisco Bay Region, including water quality standards. The Water Board first adopted a plan for waters inland from the Golden Gate in 1968. After several revisions, the first comprehensive Basin Plan for the Region was adopted by the Water Board, and then approved by the State Water Board, in April 1975. Major revisions have been adopted since 1975 to address changing water quality conditions, priorities, and programs. Because Total Maximum Daily Load (TMDL) Basin Plan amendments are now being adopted on an on-going basis, the Basin Plan is subject to more frequent revisions than in the past. The most current version of the Basin Plan is available on the Water Board's website at this location (http://www.waterboards.ca.gov/sanfranciscobay/basin_planning.html).

The Basin Plan establishes water quality standards for the San Francisco Bay Region. Water quality standards include designated beneficial uses for surface and ground-waters; narrative or numeric water quality objectives to protect those beneficial uses; and a provision to protect high quality waters from degrading to the level allowed by the objectives (i.e., antidegradation). Basin Plans also include implementation plans for water quality objectives, consisting of various regulatory programs.

The Triennial Review of the Basin Plan provides an opportunity to review and receive public input on water quality standards and implementation plans. The review results in a list of prioritized future Basin Plan amendments with short project descriptions. The review includes solicitation of public comments on potential TMDL projects, but Basin Plan amendment projects to develop TMDLs are not included in the work plan. The review is required under section 303(c)(1) of the federal Clean Water Act (CWA) and section 13240 of the California Water Code.

During the Triennial Review process, Water Board staff 1) consider public comments on Basin Plan projects that may require investigation; 2) develop a prioritized list of Basin Plan projects that may be pursued by Water Board staff over the next three years; and 3) present the list in the form of a resolution for Water Board consideration. The inclusion of a candidate project on the prioritized Triennial Review list does not necessarily mean that the project will be fully developed such that a Basin Plan

amendment would be accomplished in the next three years. Complex projects can take more than three years to complete, even when ranked as a priority.

This staff report includes: a description of Clean Water Act requirements for Triennial Reviews, a description of the Triennial Review process, a summary of public and tribal participation, a description of the methodology used to evaluate and rank each candidate project, estimates of the time and staff resources needed to act on each project over the next three years, a generalized ranking of the candidate projects by priority, and a brief description (in Appendix A) of each candidate project.

2. Clean Water Act Requirements of Triennial Review

During the Triennial Review process, the Water Board receives public input on water quality standards and evaluates the need to modify or adopt new water quality objectives or beneficial uses, referred to as "designated uses" in the CWA, in accordance with the CWA requirements. Federal regulations at 40 CFR § 131.20(a) provides, "The State shall from time to time, but at least once every 3 years, hold public hearings for the purpose of reviewing applicable water quality standards . . . ." This review includes consideration of new or updated CWA section 304(a) criteria recommendations published by U.S. EPA. CWA section 303(c)(2)(B) provides "that a state shall adopt criteria for toxic pollutants for which criteria have been published under CWA section 304(a), the discharge or presence of which in the affected waters could reasonably be expected to interfere with those designated uses adopted by the State, as necessary to support designated beneficial uses." Acknowledging the importance of meaningful and transparent public involvement as a key component of the Triennial Review process, the U.S. EPA adopted the 2015 Water Quality Standards Regulatory Revisions rule (80 Fed. Reg. 51020, (August 21, 2015)). The rule modified 40 CFR § 131.20(a) to require states and tribes to provide an explanation for why they did not adopt new or revised criteria for parameters for which U.S. EPA has published new or updated CWA section 304(a) criteria recommendations. The rule is to transparently communicate to the public that states considered U.S. EPA's new or updated CWA section 304 recommended criteria. States and tribes are not required to adopt the recommended criteria but must consider them. "Ultimately, states and authorized tribes must adopt criteria that are scientifically defensible and protective of designated uses to ensure [water quality standards] 'protect public health or welfare, enhance water quality and serve the purposes of' the CWA.[1] (80 Fed. Reg. 51028.) States and authorized tribes must "provide an explanation for why they did not adopt new or revised criteria for parameters for which EPA has published new or updated CWA section 304(a) criteria

[1] Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), the Water Board must also consider other factors in establishing water quality objectives, i.e., water quality criteria. (See Wat. Code section 13241.)

recommendations since May 30, 2000." (*Id*.) "A state's or authorized tribe's explanation may be situation-specific and could involve consideration of priorities and resources." (*Id*. at p. 51029)

Appendix B contains the Water Board's consideration of new or revised CWA section 304(a) recommended criteria for certain toxic pollutants and explanation for why, based on its analysis, it is unnecessary to revise the Basin Plan water quality objectives for those pollutants in light of the new or revised recommended criteria (some 304(a) criteria are old ~~and pre-date May 30, 2000,~~ but are also considered). Specifically, the Water Board considered 304(a) recommended criteria for those toxic pollutants for which the Water Board has adopted site-specific objectives (SSOs) or objectives that are unique to the region. Based on the Water Board's analysis and currently available information, these water quality objectives are protective of beneficial uses and do not need to be revised. For statewide water quality objectives, the State Water Resources Control Board (State Water Board) is in the process of reviewing federally promulgated water quality standards for California and Clean Water Act section 304(a) recommended criteria. The Water Board will rely on the State Water Board's review of CWA section 304(a) criteria recommendations since it is responsible for statewide water quality objectives. Consistent with past practices, the Water Board will coordinate with the State Water Board to ensure that any action to adopt or revise statewide water quality objectives resulting from its CWA 304(a) review supersedes corresponding Basin Plan objectives. The State Water Board has confirmed that any statewide standards action it takes following its review of 304(a) criteria will apply to the San Francisco Bay region through the Inland Surface Water and Enclosed Bays and Estuaries Plan. Therefore, the "Editorial Revisions, Minor Clarifications, or Corrections" project (see Appendix A) now includes potential non-regulatory, clean-up revisions to the Basin Plan water quality objectives to reflect the State Water Board's water quality standards actions following its CWA section 304(a) recommended criteria review. Because the review included in Appendix B and the State Water Board's review of, and potential action related to, 304(a) criteria for statewide standards address the requirements of the CWA, a candidate Triennial Review project to review CWA section 304(a) criteria is no longer needed in the list of candidate projects in Appendix A.

In addition to review of new or revised CWA section 304(a) criteria, 40 C.F.R. § 131.20(a) provides a public hearing must be provided for the purposes of reviewing "applicable water quality standards," which are those water quality standards either approved or promulgated by U.S. EPA for a state or tribe. (80 Fed. Reg. 51029.) U.S. EPA states that states and tribes must, "at a minimum, seek and consider public comments on all applicable [water quality standards." (*Ibid*.) The Water Board has sought and considered public comments on all applicable water quality standards, from its initial public notice announcing its triennial review of water quality standards to the upcoming triennial review public hearing. As of the date of this revised Staff Report, there is no new information that new or revisions to applicable water quality standards

(comprising beneficial uses, water quality objectives, and antidegradation policies) are necessary or appropriate beyond those identified in this Staff Report.

Federal regulations also provide that states re-examine any waterbody segment with water quality standards that do not include the uses specified in CWA section 101(a)(2) (often called “fishable/swimmable” uses) to determine if any new information has become available pertaining to indicating attainability. (40 C.F.R. § 131.20(a)) Where new information indicates attainability of the fishable/swimmable uses, the regulations provide that the state shall revise its standards accordingly. Appendix C contains a review of new information with respect to CWA section 101(a)(2) uses in the San Francisco Bay Region. Specifically, new information was reviewed to confirm the ongoing applicability of the 2011 Use Attainability Analysis (UAA) that resulted in the de-designation of the water contact recreation use in Hayward Marsh. Additionally, Water Board review of new information pertaining to the Commercial and Sport Fishing (COMM) beneficial use in the Basin Plan informed modifications to the scope of the COMM use designation project described in Appendix A. The scope of this project has been modified to include COMM designations for the following lakes and reservoirs listed in the Basin Plan for which the COMM use is not currently designated.

Lake Herman	Lake Chabot (Solano County)	Briones Reservoir
Upper San Leandro Reservoir	Lake Henne	Bon Tempe Reservoir
Calaveras Reservoir	Lower Crystal Springs Reservoir	Pilarcitos Reservoir
Ogier Quarry Ponds	Almaden Reservoir	Calero Reservoir
Guadalupe Reservoir	Lake Almaden	Lake Elizabeth
Lake Madigan	Wildcat Lake	Crystal Lake
Pelican Lake	Laguna Lake	Pomponio Reservoir
Golden Gate Park Lakes	Mountain Lake	Upper Crystal Springs Reservoir
San Andreas Reservoir	San Antonio Reservoir	Lake Lagunita (San Mateo)
Felt Lake	Searsville Lake	Los Capitancillos Percolation Ponds
Guadalupe Percolation Ponds	Cherry Flat Reservoir	Lake Dalwigk
Milliken Reservoir	Jewel Lake	Rector Reservoir

Angwin Lakes	Bell Canyon Reservoir	Kimball Reservoir
Lake Frey	Suisun Reservoir	Lake Curry

Two of the water bodies listed above, Lake Henne and Ogier Quarry Ponds, are not currently included in the Basin Plan. Accordingly, additional 101(a)(2) uses (contact recreation, wildlife habitat, and warmwater habitat) will be designated along with the COMM beneficial use. Water Board staff will also continue to search for new information on fishing in additional water bodies for which the COMM use is not already designated, and, if such new information indicates attainability, COMM will be designated for those additional waterbodies as well.

Federal regulations also provide for the Water Board to evaluate whether there is any new information about tribal reserved rights applicable to state waters that needs to be considered to establish water quality standards consistent with 40 CFR § 131.9. (40 CFR § 131.20(a).) Section 131.9 provides that a state must undertake certain actions where a tribal reserved right has been asserted in writing. The Water Board conducted outreach to tribes as part of the Triennial Review solicitation process (see below), and no reserved right has been asserted.

3. Triennial Review Process

In early 2024, Water Board staff began the Triennial Review process by soliciting input from all Water Board divisions and reviewing available information to determine where updates may be needed to beneficial uses, water quality objectives, implementation plans, plans or policies, or where editorial changes may be needed. Water Board staff developed a tentative list of candidate Basin Plan projects for public review. This effort included: review and update of the list of priority Basin Plan projects identified in the last Triennial Review, coordination with the statewide Basin Plan roundtable, and an internal review of the Water Board's regulatory program needs. Based on this effort, Water Board staff produced and distributed a "Candidate Projects for the 2024 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan" document, describing candidate projects. The nine projects included in this document are shown in Table 1. Based on public input, we updated some of these projects, removed one (consideration of CWA 304(a) criteria, see explanation above in Section 2), and added three additional projects. All candidate projects are described in more detail and in descending rank order in Appendix A.

On April 10, 2024, the public participation process for the Triennial Review formally began with the distribution of an announcement of the Triennial Review of the water quality standards in the Basin Plan, a list of candidate projects for consideration identified by Water Board staff, and an invitation for Basin Plan amendment proposals and public comment. An online form was created to collect proposals for new Basin Plan amendments, as well as support or opposition for the listed candidate projects.

The announcement specified a public comment period (April 10 – May 24, 2024) for submission of written comments. Appendix D includes a copy of the "2024 Triennial Review – Candidate Projects" announcement.

Following a review of all comments submitted by the public and a systematic ranking of all the candidate projects, Water Board staff developed a prioritized list (see Section 8 below) of candidate Basin Plan projects to pursue during the upcoming three-year period.

Formal completion of the Triennial Review involves the Water Board adopting a resolution approving the Triennial Review of the Basin Plan along with a prioritized list of Basin Plan projects. Water Board staff will provide a formal response to comments received on this staff report as part of the Board package supporting the Water Board's Triennial Review resolution.

Table 1. Basin Plan Projects Described by Water Board Staff in the Candidate Project List document released April 2024

Update Beneficial Uses
2.1 Addition of Commercial and Sport Fishing Beneficial Use to Lakes
2.2 Designate Tribal Tradition and Culture, Tribal Subsistence Fishing, and Subsistence Fishing Beneficial Uses in the San Francisco Bay Region
2.3 Evaluate and Refine the Shellfish Harvesting Beneficial Use
Update Water Quality Objectives
3.1 Consider Incorporating Clean Water Act Section 304(a) Criteria into the Basin Plan
3.2 Clarify Implementation Requirements for Municipal Supply and Agricultural Supply Water Quality Objectives
3.3 Clarify Turbidity Water Quality Objective
Update Implementation Plans
4.1 Climate Change and Shoreline Adaptation Policy
4.2 Climate Change and Riparian Area Protection Policy
Essential Basin Planning Activities
5.1 Editorial Revisions, Minor Clarifications, or Corrections

Note: The first digit of the project number is the Basin Plan chapter that would be revised through the proposed project.

4. Summary of Public Participation Process

On April 10, 2024, the public participation process for the Triennial Review formally began with the distribution of an announcement of the Triennial Review, a list of candidate projects for consideration identified by Water Board staff, and an invitation for Basin Plan amendment proposals and public comment.

An online form was created to collect proposals for basin plan amendments. A link to this form was shared widely through our website and e-mails to over 1,100 recipients subscribed to our Basin Planning and Total Maximum Daily Load e-mail lists. Six responses were received through the online form. These responses included support for projects identified by Water Board staff, suggestions for new potential projects for Water Board staff to consider, editorial amendment requests, and requests that would not require a Basin Plan amendment. Many of the public comments encouraged the Water Board to continue working on candidate projects already underway. These comments are summarized below. Commenters included private citizens and representatives of different organizations. Parties who provided comments during the solicitation process are listed below:

- Bay Area Clean Water Agencies (BACWA), Mary Cousins
- City of Daly City, Tom Hall
- EOA, Inc., Tom Hall
- San Francisco Public Utilities Commission (SFPUC), Jennie Pang
- Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), Chris Sommers
- Private Individual, Richard Bailey

4.1. Tribal Engagement Process

In parallel with the public participation process this year, Water Board staff conducted a tribal engagement process. Staff invited tribes to review and comment on the 2024 Triennial Review candidate projects through letters, e-mails, and phone calls. Water Board staff-initiated outreach by sending hard copy letters and e-mails on March 25, 2024, to 33 tribes. Although no tribes responded directly to Water Board staff through letters, e-mails, or via the online form, Water Board staff did receive support to continue with the project “Designate Tribal Tradition and Culture, Tribal Subsistence Fishing, and Subsistence Fishing Beneficial Uses in the San Francisco Bay Region” through interactions on that project.

Effective June 3, 2024, states are required to evaluate whether there is any new information available about Tribal reserved rights applicable to State waters that needs to be considered to establish water quality standards consistent with 40 CFR section 131.9. (40 C.F.R. § 131.20(a)). Water Board staff engaged with the following Tribes as part of the Triennial Review process.

Amah Mutsun Tribal Band	Indian Canyon Mutsun Band of Costanoan	Tule River Indian Tribe
Amah Mutsun Tribal Band of Mission San Juan Bautista	Kashia Band of Pomo Indians of the Stewarts Point Rancheria	United Auburn Indian Community of the Auburn Rancheria
Cachil Dehe Band of Wintun Indians of the Colusa Indian Community	Lytton Rancheria	Wilton Rancheria
Chicken Ranch Rancheria of Me-Wuk Indians	Middletown Rancheria of Pomo Indians	Yocha Dehe Wintun Nation
Cloverdale Rancheria of Pomo Indians	Mishewal-Wappo Tribe of Alexander Valley	Muwekma Ohlone Indian Tribe of the SF Bay Area
Confederated Villages of Lisjan Nation	Muwekma Ohlone Indian Tribe of the SF Bay Area	Nashville Enterprise Miwok-Maidu-Nishinam Tribe
Cortina Rancheria - Kletsel Dehe Band of Wintun Indians	Northern Valley Yokut/Ohlone Tribe	Northern Valley Yokut/Ohlone Tribe
Costanoan Ohlone Rumsen-Mutsen Tribe	Robinson Rancheria of Pomo Indians	Pinoleville Pomo Nation
Costanoan Rumsen Carmel Tribe	Sherwood Valley Rancheria of Pomo	Wilton Rancheria
Federated Indians of Graton Rancheria	Tamien Nation	Wuksachi Indian Tribe/Eshom Valley Band
Guidiville Indian Rancheria	The Ohlone Indian Tribe	Dry Creek Rancheria of Pomo Indians

Although this engagement commenced before the effective date of the regulatory update requiring the Water Board to consider new information on Tribal reserved rights, U.S. EPA published the proposed rule in 2022. (87 Fed. Reg. 74361 (2022).) Water Board staff have not received any new information about Tribal reserved rights to evaluate. Water Board staff will continue to engage with U.S. EPA and Tribes to receive relevant information regarding Tribal reserved rights and consider modifications to water quality standards, as appropriate.

4.2. Public Input in Support of Candidate Projects

Many commenters supported various projects presented by Water Board staff in the document describing the candidate projects for the 2024 Triennial Review. Those projects receiving supporting comments are discussed below along with relevant concerns or clarifying comments, if any, expressed by the commenter. Please note the project numbering system below is a way of uniquely identifying projects based on the chapter in which the edits are focused, which is independent of the later ranking (see Table 1 for the full list of projects).

2.2 Designate Tribal Tradition and Culture, Tribal Subsistence Fishing, and Subsistence Fishing Beneficial Uses in the San Francisco Bay Region. BACWA encourages the Water Board to move forward with designating these beneficial uses.

2.3 Evaluate and Refine the Shellfish Harvesting Beneficial Use. Three entities supported this project. SFPUC supports this project and notes that many locations in the Bay Area do not have shellfish harvesting and asserts that refining this beneficial use will help save resources. EOA, Inc. supports this project and recommends refining the SHELL definition to differentiate commercial/recreational shellfish harvesting and adding definition of shellfish bed (e.g., edible shellfish present in legal sizes and numbers worth the effort of harvesting by the public). BACWA also supports this project and recommends refining spatial and temporal patterns of shellfish harvesting, as well as distinguishing between commercial and recreational shellfish harvesting.

3.2 Clarify Implementation Requirements for Municipal Supply and Agricultural Supply Water Quality Objectives. BACWA encourages the Water Board to pursue this Basin Plan amendment citing that “it would be helpful in clarifying NPDES permit requirements for the handful of municipal wastewater treatment plans that discharge to water bodies supporting the municipal (MUN) and agricultural supply (AGR) beneficial uses.”

3.3 Clarify Turbidity Water Quality Objective. BACWA encourages the Water Board to move forward with this project and recommends the use of precise language when describing light penetration and turbidity.

4.1 Climate Change and Shoreline Adaptation Policy. BACWA supports this project and recommends that the Water Board use the Basin Plan to encourage the use of wastewater in creating, restoring, and enhancing wetlands when such projects have the potential to increase shoreline resiliency.

6.1 Editorial Revisions, Minor Clarifications, or Corrections. EOA, Inc., and BACWA supported this project and provided further recommendations. EOA, Inc., supports updating the Toxicity Provisions in the Basin Plan Section 4.5.5.3 and recommends that the Water Board remove outdated references and conforms with

State Water Board Toxicity Provisions. EOA, Inc., also supports replacing and expanding the Compliance Schedule in the Basin Plan Section 4.7.6 to conform with State Water Board Policy and address schedules longer than ten years for nutrients. EOA, Inc., also suggests that the Water Board update Dilution Ratios in the Basin Plan Section 4.6.1 to remove outdated language and reference the current San Franciso Estuary Institute Bay-wide 3-D hydrodynamic biogeochemical model with shallow and deepwater dilution capabilities. In addition, EOA, Inc., recommends a language update in Background Concentration in the Basin Plan Section 4.6.3 which reflects use of multiple concentrations instead of a single bay-wide background concentration. EOA, Inc., recommends a language update in Cyanide in the Basin Plan Section 4.7.2.2 to reflect that alternative dilution credits to those contained in Table 4-6 may be applied for calculation of shallow water discharge effluent limits consistent with the Basin Plan Amendment adopted per Resolution R2-2023-0026. BACWA supports a Basin Plan amendment to update toxicity testing requirements that have been superseded by statewide policy. Lastly, BACWA urges the Water Board to make a single, searchable version of the Basin Plan available in either HTML or PDF format. Staff note that the Basin Planning webpage contains an HTML version of the complete Basin Plan text, not including tables or figures, that is useful for text searches.

4.3. Other Potential Projects Proposed by Commenters

Public comments covered a wide range of potential new projects not on the proposed list. Water Board staff considered these comments and determined whether to evaluate a newly proposed project as a candidate Basin Plan project.

In summary, the solicitation process and public input resulted in a total of three additional candidate Basin Plan projects to be considered and ranked during the 2024 Triennial Review. The ranking process is described in section 4 below, and summaries of all ranked projects are included in Appendix A.

In the following table, we summarize the additional candidate projects suggested by stakeholders and explain the resolution to the suggestion.

Table 2. Additional Candidate Projects Suggested by Commenters

Entity	Topic	Resolution
Richard Bailey (Private Individual)	"Use of local dredged material to create a wetland / erosion control area in Lake Merritt. This project was evaluated and supported in the Lake Merritt Enhancement Plan and amendments (Water Board Staff have a copy). Details are described in that document.	This additional candidate project did not apply to the Triennial Review. However, the comments were shared with Water Board staff working on the development of a Total Maximum Daily Load / Advance Restoration Plan to improve low dissolved oxygen in Lake Merritt.

Entity	Topic	Resolution
	This project would increase wildlife habitat, improve water quality, limit shoreline erosion, and significantly lower cost for disposal of dredged material."	
City of Daly City	The Water Board should "modify Basin Plan Section 3.3.9 to add new pH freshwater quality objectives for Lake Merced based on the existing USEPA freshwater quality criteria (EPA Gold Book, 1986) of 6.5 - 9.0 based on factors specific to Lake Merced."	A candidate project description was created (see Appendix A), and this project has been ranked during the 2024 Triennial Review.
EOA, Inc., and BACWA	The Water Board should develop a Water Quality Attainment Strategy for nutrient management in SF Bay that provides an implementation framework and extended compliance schedule.	A candidate project description was created (see Appendix A), and this project has been ranked during the 2024 Triennial Review.
SCVURPPP	SCVURPPP remains interested in the candidate project to evaluate the contact recreation beneficial use designations for creeks and channels in Santa Clara County.	A candidate project description was created (see Appendix A), and this project has been ranked during the 2024 Triennial Review.

5. Project Ranking Criteria

For every Triennial Review, there are more candidate projects than can be accomplished with available resources: two full-time staff positions funded for Basin Planning efforts. Thus, it is necessary to rank candidate projects to identify the highest priorities. The ranking criteria and scoring are straightforward. Each candidate project receives an overall score, which sums the project's individual scores for several ranking criteria. The highest score possible for a candidate project is 90 points, and the highest scoring projects will be given priority for Water Board staff action in the following three-year period, subject to available resources. It is important to emphasize that the score assigned to a project for each ranking criterion merely reflects how this project compares to other candidate projects in this scoring category. This scoring is not intended as a judgment of the absolute merit of the project with respect to this scoring category. The ranking criteria and scoring are described below.

5.1. Water Board Mission (Protect Beneficial Uses)

Projects that promote protection or restoration of beneficial uses were given higher scores (20 is the highest score possible), while projects that would result in little or no direct improvement of beneficial uses were given lower scores. A score of zero was given for projects judged not to include some strengthening of beneficial use protection or restoration.

5.2. Climate Change Nexus

This criterion recognizes the value of projects that involve some adaptation or policy response to climate change. The Water Board has identified climate adaptation as a priority for 2021 and will likely continue to make it a priority in the future. Staff have made significant investments in new partnerships and stakeholder engagement, developed policy and permitting language to include in future regulation, and provided technical assistance to communities around the Bay to support climate change risk assessments and adaptation plans. This work is on-going, and staff expects our climate change adaptation strategy to include Basin Plan projects. The maximum score for this criterion is 15 points.

5.3. Public Interest

Water Board staff solicited input from the public, including the regulated community, citizens, and environmental groups. Projects supported by multiple parties or stakeholders received the highest score of ten in this category.

5.4. External Resources Already Invested

This criterion recognizes and gives higher priority to projects for which external resources have already been expended. External resources may include grant funding or funding provided by affected parties to assist Water Board staff in coordinating technical information and stakeholder outreach for Basin Plan amendments. Projects that have received substantial external investment received a score of ten; other projects received a score in proportion to the amount of external resources invested to date.

5.5. Staff Resources Already Invested

This criterion recognizes and gives higher priority to projects for which the Water Board has already expended substantial staff resources. Projects already underway for a year or more received a score of ten. Projects for which no work has been undertaken received a score of zero. Projects for which some staff resources have been expended but are still at early stages of development were assigned a score in proportion to the amount of resources expended to date.

5.6. Implement State Water Board Policy

In all Triennial Reviews conducted by the Regional Water Boards, one of the first items reviewed is whether there have been changes in statewide policies or plans that result in Basin Plan language inconsistent with the new plans or policies. A highest score of

five was given to projects that would bring the Basin Plan into conformance with statewide plans or policies.

5.7. U.S. EPA Priority

Projects that address comments in a U.S. EPA Basin Plan approval letter or other input from U.S. EPA, such as the comment letters on previous Basin Plan amendments or the comment letter on past or current Triennial Reviews, where U.S. EPA stated strong support for a project, were given a score of five, and candidate projects that did not relate to known or stated U.S. EPA interests received a score of zero. In some cases, projects were given a score between zero and five if U.S. EPA expressed an interest in the topic area.

5.8. External Resources Likely Available

Similarly, where external resources will be (or will continue to be) dedicated to a project, higher priority is given. Such resources would augment Water Board staffing, helping to complete controversial or complex projects that otherwise might not have adequate staffing. Scores were assigned based on experience with projects where external resources have been invested, as described above, with a maximum possible score of five. Other projects received a score in proportion to the amount of likely external resources available.

5.9. Geographic Scope

Projects that address multiple water bodies and regulated entities throughout the Region received higher scores (maximum of five) than projects that were specific to a location or discharger.

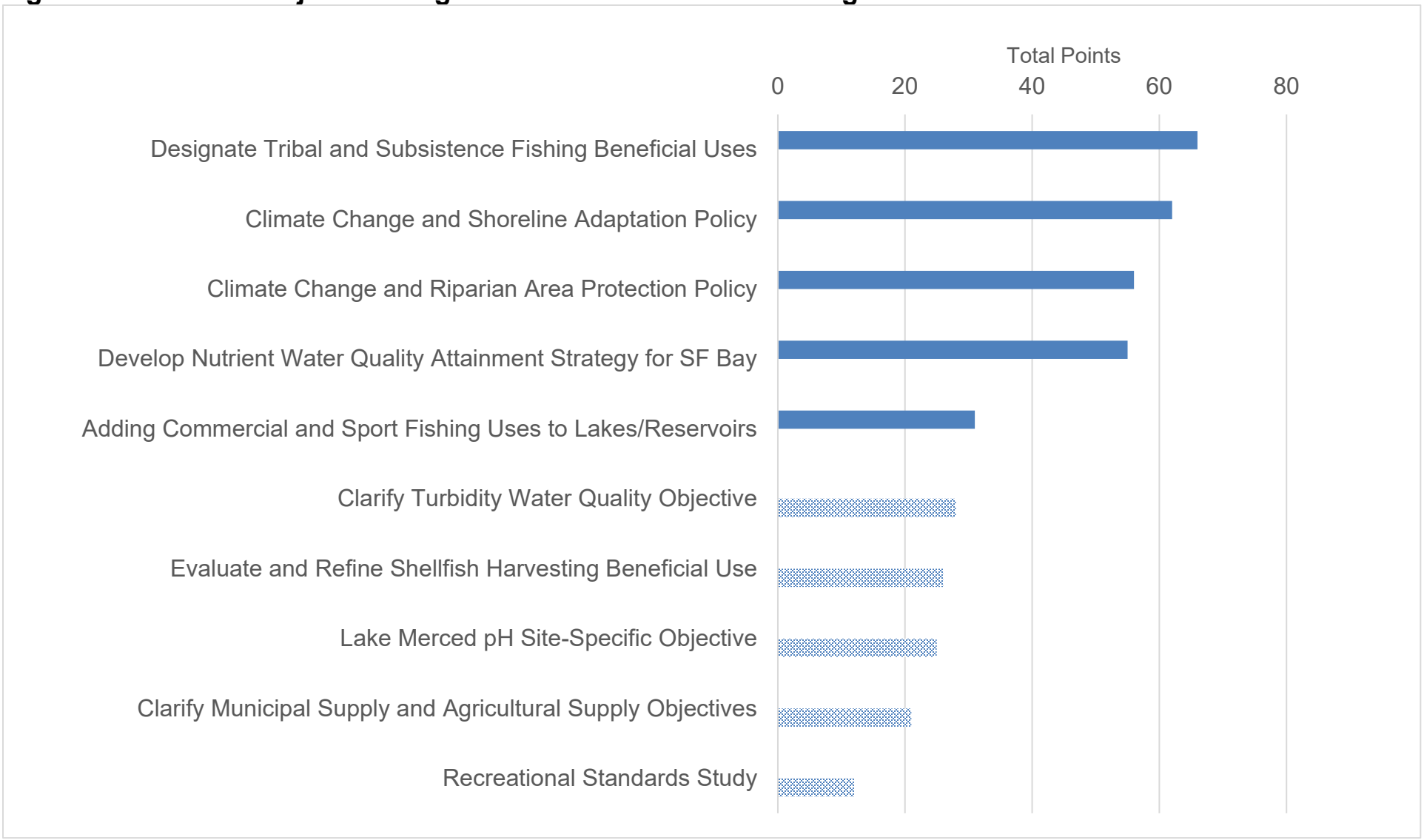
5.10. Input from Internal Water Board Divisions

Staff from the Water Board's Toxics, Groundwater Protection, Watershed, NPDES, and Planning divisions were tasked with identifying Basin Plan projects that would facilitate program implementation, clarify the Basin Plan, and provide better customer service. Five points were given to projects identified as top division priorities.

6. Project Ranking Results

Using the criteria described in Section 4, a score was assigned for each criterion for every candidate Basin Plan project. Points across all ranking criteria were summed for almost every project to determine its overall score. The "Editorial Revisions, Minor Clarifications, or Corrections" project was reclassified as an essential Basin Planning activity and therefore removed from the ranking process. The overall score and rank for each candidate project are graphically displayed in Figure 1. Criteria scores for individual projects are shown in Table 3.

Figure 1. Basin Plan Project Ranking Scores and Generalized Rankings



The bars on this page reflect the points allocated based on the Project Ranking Criteria described in Section 4. The following table shows the points for each project and criterion in more detail. The highest score possible for a candidate project is 90 points. The solid fill indicates that these projects received enough points to be prioritized for fiscal years 25/26 through 27/28. The two lowest-ranked priority projects exceed the allocated cumulative 5.0 PY available for the next three years. We anticipate that some parts of the nutrient project will be completed with the available resources. We will use 0.3 PY of the Basin Planning reserved for non-discretionary resources to accomplish the COMM designation project.

Table 3. Rank-Ordered Scoring for Individual Projects

Rank	Project Title	Water Board Mission (20 pts)	Climate Change Nexus (15 pts)	Public Support (10 pts)	External Resources Invested (10 pts)	Staff Resources Invested (10 pts)	Implement State Board Policy (5 pts)	U.S. EPA Priority (5 pts)	External Resources Likely Available (5 pts)	Geographic Scope (5 pts)	Input from Water Board Divisions (5 pts)	Score (90 pts total)
1	Designate Tribal and Subsistence Fishing Beneficial Uses+	20	0	10	5	10	5	5	3	3	5	66
2	Climate Change and Shoreline Adaptation Policy	15	15	3	6	5	3	0	5	5	5	62
3	Climate Change and Riparian Area Protection Policy	15	15	0	5	5	3	0	3	5	5	56
4	Develop Nutrient Water Quality Attainment Strategy for SF Bay	10	5	10	10	5	0	0	5	5	5	55
5	Adding Commercial and Sport Fishing Uses to Lakes/Reservoirs	10	0	0	2	6	3	5	0	5	0	31

Rank	Project Title	Water Board Mission (20 pts)	Climate Change Nexus (15 pts)	Public Support (10 pts)	External Resources Invested (10 pts)	Staff Resources Invested (10 pts)	Implement State Board Policy (5 pts)	U.S. EPA Priority (5 pts)	External Resources Likely Available (5 pts)	Geographic Scope (5 pts)	Input from Water Board Divisions (5 pts)	Score (90 pts total)
6	Clarify Turbidity Water Quality Objective	10	0	3	0	5	0	0	0	5	5	28
7	Evaluate and Refine Shellfish Harvesting Beneficial Use	5	0	8	0	2	3	0	3	5	0	26
8	Lake Merced pH Site-Specific Objective	5	0	3	6	5	0	0	5	1	0	25
9	Clarify Municipal Supply and Agricultural Supply Water Quality	5	0	3	0	0	0	0	3	5	5	21
10	Recreational Standards Study	5	0	3	0	0	0	0	3	1	0	12
11*	Editorial Revisions, Minor Clarifications, or Corrections	-	-	-	-	-	-	-	-	-	-	-

Notes:

The highest score possible for a candidate project is 90 points.

[+] The Public Support criterion for this project was updated to reflect statements of support received from stakeholders on the April online survey and during the public comment period.

* The “Editorial Revisions, Minor Clarifications, or Corrections” project was reclassified as an essential Basin Planning activity and therefore removed from the ranking process.

7. Priority Ranking for TMDL Development

Water Board staff are working on developing a range of TMDL projects throughout the Region. TMDLs often include water quality standards issues, and most will be adopted as Basin Plan amendments. For these reasons, we include our TMDL priorities in the Triennial Review. Staff has identified the following TMDL projects as the highest priority for development and completion as Basin Plan amendments over the next three years:

- Pescadero Marsh Low Dissolved Oxygen TMDL alternative / Advance Restoration Plan
- San Francisco Bay Beaches Pathogens 2 TMDL (Coyote Point Beach in San Mateo, Erckenbrack Park Beach, Gull Park Beach, Marlin Park Beach, and Kiteboard Beach in Foster City; and Oyster Point Beach in South San Francisco)
- Lake Merritt Dissolved Oxygen TMDL alternative / Advance Restoration Plan
- San Francisco Bay Mercury TMDL reopener
- San Francisco Bay PCB TMDL reopener

TMDL projects with the label Advance Restoration Plan may be addressed by developing a Water Quality Improvement Plan (WQIP), rather than a TMDL and Basin Plan amendment. Development of a WQIP does not remove our obligation to address the impairment with a TMDL if standards are not attained in a reasonable time frame.

8. Available Resources

Non-TMDL Basin Plan resources for the San Francisco Bay Region consist of 2 personnel-years (PY) within each fiscal year. Available Planning Division staff over the next three years (FY 25/26 to 27/28) is thus estimated at 6 PY, pending any future budget changes. Approximately one-sixth of these Basin Planning staff resources will be reserved for activities that are not discretionary so approximately 5 PY remain for allocation to Basin Plan projects.

These non-discretionary activities fall into two categories. First, Basin Planning staff must represent the Water Board by participating in a variety of roundtables, committees, and stakeholder processes. These include statewide Basin Planning roundtable and workgroups associated with development of statewide policies (e.g., the Biostimulatory Substances Objective and Program to Implement Biological Integrity). Second, the Planning Division has a responsibility to ensure that the Basin Plan is kept up-to-date and accurate by making changes to the Basin Plan that clarify or update some of the program descriptions to be

consistent with new laws, plans, and regulations or to correct minor errors. These changes are sometimes needed for clarity and to ensure that the public is informed about the latest requirements to protect water quality. Funding will be used to merge some Basin Plan cleanup along with an existing Basin Plan amendment.

For work planning purposes, low complexity Basin Plan projects require between 0.3 and 0.5 PY to result in Board action. This is the minimum amount of resources required by a Basin Plan project due to the effort-intensive public process required for the Regional Board adoption and State Board approval processes. Medium complexity amendments generally require between 0.6 and 1.2 PY, depending on whether substantial investigatory work has already been accomplished, including resource expenditure external to the Water Board. High complexity projects generally require from 1.5 to 3.0 PY over three years, both because of greater investigatory requirements and level of controversy.

Planning Division staff believes that all candidate projects identified through this Triennial Review merit at least an initial assessment and investigation to determine if the project should be fully executed. A low rank during this review does not imply that staff concludes that the project should not, at some point, be pursued. The work planning exercise of the Triennial Review highlights the fact that, while numerous outstanding Basin Planning actions are warranted at this and other Water Boards, there are not sufficient staff resources to accomplish every project in the near term.

In the San Francisco Bay Region, staffing for planning has historically been augmented by other sections or divisions to address outstanding issues that affect a particular Water Board program. In addition, other resources from external sources are sometimes available to help augment Basin Planning activities. While not a certainty, other resources, external and from other divisions of the Water Board, may be available to augment the 5.0 PY available for Basin Plan projects, and thus additional projects may be considered during any given year.

9. Proposed Basin Plan Projects

Based on the ranking criteria and available resources, as described in previous sections of this staff report, the projects shown in Table 4 comprise staff's recommendation for the Basin Planning work plan for the San Francisco Bay Region for the next three years occurring in fiscal years 25/26, 26/27, and 27/28. This table shows all high priority projects that can be accomplished with existing Basin Planning resources (5.0 PY).

Basin Plan projects that ranked below the level for which resources are available have not been eliminated from further consideration. For instance, if higher ranking priority projects take less staff time than estimated, additional lower

ranked projects not shown in this table may be addressed during the next three years. Affected parties may also provide resources to address specific planning issues in partnership with the Water Board, recognizing that at least some Water Board staff time is necessary to accomplish such Basin Planning. Each year, Water Board staff will develop annual work plans for non-TMDL Basin Plan projects, coordinated with the statewide Basin Planning Roundtable. As internal or external resources are identified and targeted to Basin Planning activities over the next three years, the prioritized list reflected in Figure 1 and the project descriptions in Appendix A will provide guidance as to where to direct those resources.

Table 4. High Priority Basin Plan Projects Versus Available Resources

Project	Required PY	Cumulative PY
Designate Tribal Tradition and Culture, Tribal Subsistence Fishing, and Subsistence Fishing Beneficial Uses in the San Francisco Bay Region	1.0	1.0
Climate Change and Shoreline Adaptation Policy	1.5	2.5
Climate Change and Riparian Area Protection Policy	1.5	4.0
Develop Nutrient Water Quality Attainment Strategy for SF Bay	1.5	5.5
Addition of Commercial and Sportfishing Use to Lakes and Reservoirs	0.3	5.8

The two lowest-ranked priority projects exceed the allocated cumulative 5.0 PY available for the next three years. We anticipate that some parts of the nutrient project will be completed with the available resources. We will use 0.3 PY of the Basin Planning reserved for non-discretionary resources to accomplish the COMM designation project.

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APPENDIX A: RANK-ORDERED DESCRIPTIONS OF PROJECTS CONSIDERED IN THE 2024 BASIN PLAN TRIENNIAL REVIEW

Contents

Editorial Revisions, Minor Clarifications, or Corrections

Possible Basin Plan editorial changes have been identified by Water Board staff and through suggestions submitted by the public during previous Triennial Reviews. Some of these could be included as additional components for another Basin Plan project. Potential changes include but are not limited to:

- Update Section 4-8 (Stormwater Discharges) to incorporate by reference the limitations on point source stormwater and nonpoint source discharges to provide special protections for marine aquatic life and natural water quality in Areas of Special Biological Significance (ASBS).
- Update Sections 4-8 and 4-14 on urban stormwater to remove outdated and confusing terminology. The two sections should be combined, streamlined, and edited to be consistent with current regulatory practices.
- Discuss requirements of the Sustainable Groundwater Management Act in Chapter 4.
- Discuss direct and indirect potable use programs in Chapter 4.
- Cleanup Chapters 5 and 6 in terms of citations to plans and policies as well as water quality monitoring information. Consider dropping Chapter 6 and moving essential material elsewhere in the Basin Plan.
- Update or delete Figure 4-4 noting dredge material disposal and beneficial reuse sites.
- Add to the Basin Plan several unnamed water bodies that receive permitted discharges. The Basin Plan names some of the water bodies in the San Francisco Bay Region and designates beneficial uses for these water bodies. However, a small number of NPDES wastewater permits cover discharges to water bodies not named in the Basin Plan. This should be a straightforward project that could feasibly be combined with another Basin Plan amendment.
- Update the Basin Plan's toxicity testing requirements. In December 2020, the State Water Board approved an amendment to the Toxicity Control Provisions of the Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. The new toxicity provisions supersede aspects of the Basin Plan's current toxicity policy, so the Basin Plan must be edited to conform to the policy. This change would add reference to the Toxicity Provisions, remove the superseded text.
- Align the Ocean Plan and Basin Plan for recreational contact use (REC1). The applicability of the water contact recreation (REC1) beneficial use in the Pacific Ocean is defined in the California Ocean Plan. The Ocean Plan restricts effluent limits intended to protect REC1 to a zone bounded by the shoreline and a distance of 1,000 feet from the shoreline or the 30-foot depth contour and areas

designated with REC1 by a regional board. The Basin Plan provides no specific details on where REC1 applies, which leads to complications in writing NPDES permits for the San Francisco Public Utilities Commission's Oceanside outfall that discharges effluent well beyond State waters. The project would clarify that the Basin Plan's application of REC1 to the Pacific Ocean would be equivalent to the Ocean Plan's distance and depth contour specification.

- Add useful cross references to State Water Board policies to sections where they come up. For example, add to Basin Plan section 3.3.12 a sentence like "The 'Water Quality Control Plan for Enclosed Bays and Estuaries of California' contains Sediment Quality Provisions, including additional water quality objectives and related implementation provisions." And add to Basin Plan section 4.5.5.3 a sentence like "The 'Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California' contains additional water quality objectives and related implementation requirements."
- Replace the Basin Plan section 4.7.6 requirements for a compliance schedule with a reference to the requirements the State Water Board set forth in its Compliance Schedule Policy.
- Update the descriptions in Sections 4.11.3-4.11.5 as it is outdated. This revision would consider removing the language of these sections entirely, as the changing nature of the regulated community does not necessarily need to be documented in our Basin Plan.
- Documenting the Regional Water Board approved Salt and Nutrient Management Plans (SNMPs) for the Napa-Sonoma Valley: Sonoma Valley (2-2.02), Livermore Valley (2-10), and Santa Clara Valley (2-9.02) groundwater basins/sub-basins.
- Revising groundwater basin boundary maps to align with California Department of Water Resources Bulletin 118 changes that occurred as per the Sustainable Groundwater Management Act (SGMA) process. This includes adding a description of the changes in Basin Plan section 2.2.2 and revising Basin Plan Figures 2-10, 2-10C, and 2-10D to reflect the current California Department of Water Resources Bulletin 118 basin boundaries for the Westside Basin (2-35), Islais Valley Basin (2-33), and the Santa Clara Valley:Niles Cone sub-basin (2-9.01).
- Adding a description of our environmental screening levels (ESLs) that are used to inform our investigation and cleanup decisions. ESLs are conservative contaminant concentrations in a particular media (soil, soil gas, or groundwater) below which the contaminant can be assumed not to pose a significant, long-term (chronic) threat to human health and the environment.

- Adding a description of the State Water Resource Control Board's Low-Threat Underground Storage Tank Case Closure Policy that is used to assess leaking petroleum underground storage tanks in the Region.
- Incorporate statewide mercury objectives into the Basin Plan. In 2017, the State Water Board adopted Resolution No. 2017-0027, which established five new mercury water quality objectives for the protection of people and wildlife that consume fish and apply to all the inland surface waters, enclosed bays, and estuaries of the State that have the applicable beneficial uses. This effort involves making non-regulatory amendments to the Basin Plan to incorporate these new objectives and make necessary clarifications as to their applicability for various waterbodies throughout the Region.
- Make necessary clean-up revisions to Basin Plan water quality objectives to reflect State Water Board and U.S. EPA water quality standards actions.

1. Designate Tribal Tradition and Culture, Tribal Subsistence Fishing, and Subsistence Fishing Beneficial Uses in the San Francisco Bay Region

In 2017, the State Water Board adopted Resolution No. 2017-0027. The provisions for this resolution (Final Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions) defined three new beneficial uses: Tribal Tradition and Culture (CUL), Tribal Subsistence Fishing (T-SUB), and Subsistence Fishing (SUB). However, the Resolution did not designate these uses for any specific waterbodies in California nor require that the uses be designated. Regional Water Boards are generally responsible for designating beneficial uses for specific waterbodies where the use applies within their respective regions, and this designation occurs through a Basin Planning process.

The first two years of this project were the first phase which prioritized relationship-building and collaboration with tribes and subsistence fishing communities including the following: individual meetings with California Native American Tribes (tribes), community-based organizations, and community members; tribal summits that bring together multiple tribes if requested; and meetings that bring together multiple community-based organizations. To designate waterbodies with CUL, T-SUB, and SUB beneficial uses, we need more data than are currently available. This data can only come from surveys of community members and traditional ecological knowledge. We need to build relationships with these communities to get the most accurate and meaningful data. To move this project forward more effectively, we prioritized designating the CUL beneficial use in the current phase of this project. Water Board staff have been working with local tribes to document the existence of these uses and

their relevant spatial and temporal attributes and gain an understanding of what water quality objectives and implementation policies would be needed to support those uses.

The next phases of this project are to 1) add the CUL, T-SUB and SUB definitions into the Basin Plan as they are already approved and have CEQA completed; 2) designate CUL where geographically appropriate based on our collaboration with tribes; and 3) initiate development of tribal subsistence fishing surveys to inform T-SUB beneficial uses and work toward designating T-SUB where appropriate. This is likely to be completed in the next three years.

Water Board staff will also focus on designating the SUB beneficial use. In FY 24-25, staff are working with community-based organizations to pilot test a survey designed to determine the consumption rates of subsistence fishers in the Region. A future step will be to conduct that survey on a broad scale to reach a large number of subsistence fishers. The final designation of waterbodies is likely to take more than three years which aligns with our other complex Basin Plan projects.

RANKING DETAILS

CATEGORY: Update Beneficial Uses
PROPOSED BY: State Water Board
SUPPORTED BY: Bay Area Clean Water Agencies (BACWA)
SCORE: 66
COMPLEXITY: Medium
IMPLEMENTING DIVISION: Planning
ESTIMATED PERSONNEL-YEARS (PY): 1.0
PY RUNNING TOTAL: 1.0

2. Climate Change and Shoreline Adaptation Policy

The Water Board adopted the Basin Plan amendment for Climate Change and Shoreline Adaptation in June 2024 and anticipates completing the State Board and the Office of Administrative Law approvals in fiscal year 2024-2025. The Basin Plan amendment is non-regulatory and includes two components: (1) a narrative description added to Chapter 1 to explain how climate change could lead to physical and biological impacts in the Region and (2) updated language in Chapter 4 to describe our planning and permitting processes for climate adaptation projects in coastal waters, including projects that result in fill in wetlands.

Future phases or components of this Basin Planning Project could explore changes to policies in the Basin Plan to address program needs or additional policy development to (1) facilitate the beneficial use of dredged sediment and soil/sediment from other sources, (2) clarify the alternative analysis and compensatory mitigation requirements for green and grey infrastructure, (3) continue to advance use of nature-based shoreline adaptation solutions based on lessons learned from implementation of the first Basin

Plan amendment, and/or (4) address projected impacts to beneficial uses from the effects of groundwater rise in response to sea level rise.

Water Board staff have been working to maximize beneficial use of dredged sediment by participating in the Long-Term Management Strategy for Placement of Dredged Material in the San Francisco Bay Region. Water Board staff have also been collaborating with the South Bay Salt Pond Restoration Project to increase the beneficial use of upland soil for tidal marsh restoration by refining the screening process for upland soil. Based on this preliminary work, Water Board staff anticipate a potential future need for a Basin Plan amendment to advance beneficial use of dredged sediment and soil/sediment from other sources.

Water Board staff anticipate a future need to clarify the alternative analysis and compensatory mitigation requirements for green and grey climate adaptation projects. Green climate adaptation projects use nature-based infrastructure, such as marsh restoration and coarse beaches, to increase the resiliency of shorelines to sea level rise and other climate change impacts. Grey climate adaptation projects are human-engineered infrastructure, such as seawalls and revetments that protect coastal communities from flooding. In places where green infrastructure is not feasible, grey infrastructure may be necessary to protect transportation, energy-generation and wastewater treatment facilities, and communities from sea level rise. Clarifying the Water Board's approach for permitting green and grey climate adaptation projects would provide regulatory certainty for the regulated entities and landowners along the shoreline.

Water Board staff also anticipate a potential future need for a Basin Plan amendment after gathering lessons learned from implementation of the Climate Change and Shoreline Adaptation Basin Plan amendment described here. For instance, there may be a need to clarify mitigation and monitoring requirements for conversion of one wetland type to another wetland type.

RANKING DETAILS

CATEGORY: Update Plans and Policies and Update Implementation Plan
PROPOSED BY: Water Board
SUPPORTED BY: Water Board, Bay Area Clean Water Agencies (BACWA)
SCORE: 62
COMPLEXITY: High
IMPLEMENTING DIVISION: Planning, Watershed
ESTIMATED PERSONNEL-YEARS (PY): 1.5
PY RUNNING TOTAL: 2.5

3. Climate Change and Riparian Area Protection Policy

The project is a Basin Plan amendment that focuses on protecting riparian corridors and streams from climate change related impacts on water quality resulting from the

following: increases in temperature; frequency, duration, and severity of droughts; and storm magnitude and frequency. Conservation and enhancement of riparian corridors are essential elements of our climate change priorities. Riparian corridors provide numerous functions that support water quality and beneficial uses including temperature regulation, carbon sequestration, groundwater recharge, nutrient cycling, water storage, erosion prevention, pollutant filtration, and food web and structural support for aquatic habitats. Climate change creates significant additional challenges for the protection of streams, as these ecosystems will be more susceptible to increases in temperature, and changes in precipitation patterns and surface/subsurface flow interactions, which will in turn lead to alterations in hydrologic and geomorphic processes that support beneficial uses. Riparian areas and streams also provide important dispersal habitat for species undergoing climate-induced range shifts because they span the climatic gradients that species are likely to follow as they track shifting areas of climatic suitability, and they contain microclimates that are significantly cooler and more humid than immediately surrounding areas.

During the past three years of implementing this project, Water Board staff charted a course that included multiple project phases and have begun implementing the first phase, which involves assessing current watershed conditions, reviewing the science pertaining to climate change effects on riparian and stream ecosystems in the San Francisco Bay Area, identifying actions to increase watershed resilience to climate change impacts, and evaluating existing policies to explore regulatory options to protect beneficial uses of riparian corridors and streams from climate change impacts. Water Board staff have also been working with San Francisco Estuary Institute to assess current and future riparian conditions in the Petaluma River watershed.

The second phase will involve working with San Francisco Estuary Institute to: 1) map riparian areas in the San Francisco Bay Region; and 2) scale up the science and findings from the Petaluma River watershed project to the whole Region. Staff will then develop a Basin Plan amendment to update the text in Chapter 4 to include clear implementation measures to promote the resilience of riparian corridors and streams to climate change impacts in the Region.

In view of the staffing level, project scope, and likely level of effort, Water Board staff does not anticipate completing a Basin Plan amendment during this current three-year period.

RANKING DETAILS

CATEGORY: Update Implementation Plans
PROPOSED BY: Water Board
SUPPORTED BY: Water Board
SCORE: 56
COMPLEXITY: High
IMPLEMENTING DIVISION: Watershed
ESTIMATED PERSONNEL-YEARS (PY): 1.5

PY RUNNING TOTAL: 4.0

4. Develop Nutrient Water Quality Attainment Strategy for San Francisco Bay

On July 10, 2024, the Water Board adopted an NPDES permit (Order R2-2024-0013) calling for a 40 percent nitrogen load reduction for municipal wastewater facilities. The permit includes water quality based effluent limitations that must be achieved within 10 years (October 1, 2034). The Water Board also adopted a Resolution to Identify and Consider Regulatory Mechanisms to Extend Compliance Schedules for Nutrient Effluent Limitations (Resolution R2-2024-0014). In the resolution, the Board directs staff to continue participating in the Nutrient Science Program and implementing the Nutrient Management Strategy. The resolution also directs staff to explore regulatory mechanisms to provide more time for compliance via innovative technologies and multi-benefit projects that reduce nutrient loads (e.g., recycled water and nature-based solutions for nutrient reduction). Based on this direction, staff anticipate a need to develop a water quality attainment strategy (WQAS) that describes and prioritizes, for implementation, the regulatory measures that could provide more time to achieve the water quality based effluent limitations.

This 1.5 PY project would involve work over the next three years to build the scientific foundation and assemble other elements to evaluate regulatory measures to be included in the WQAS for nutrient management in SF Bay. The WQAS would draw from the efforts of the Nutrient Management Strategy to develop nutrient-related scientific understanding for the Bay, describe findings to date, and describe the efforts to reduce nutrients through the NPDES wastewater permit.

RANKING DETAILS

CATEGORY: Update Implementation Plans
PROPOSED BY: Bay Area Clean Water Agencies (BACWA), EOA, Inc.
SUPPORTED BY: Bay Area Clean Water Agencies (BACWA), EOA, Inc.
SCORE: 55
COMPLEXITY: High
IMPLEMENTING DIVISION: Planning, NPDES
ESTIMATED PERSONNEL-YEARS (PY): 1.5
PY RUNNING TOTAL: 5.5

5. Addition of Commercial and Sport Fishing Beneficial Uses to Lakes and Reservoirs

This project entails adding Commercial and Sport Fishing (COMM) where the COMM beneficial use is determined to apply. Many lakes and reservoirs in the Region already have this beneficial use designation, but we are aware that this designation is missing from some water bodies with active recreational fishing. The Water Board has obtained

new information indicating attainability of the COMM use in 42 (listed in a table in Section 2 of the Staff Report) San Francisco Bay Region lakes and reservoirs for which the COMM use is not currently designated. This information consists of various forms of evidence that fishing is occurring in these waterbodies. One source of such information is fish tissue data obtained in the reservoir assessed while preparing California's 303(d) list. The availability of such tissue data constitutes new information indicating that fishing is attainable in these water bodies because the data demonstrate that fish of consumable size are present in those waters. Other new information are from websites of reservoir operators, California's Department of Fish and Wildlife, and California's Office of Environmental Health Hazard Assessment, as well as a variety of other public websites where citizens can post information and photos about fish caught in specific waters (e.g., fishbrain.com). Consistent with the new information relating to CWA section 101(a)(2) uses just described, the Water Board intends to revise its water quality standards by designating the COMM beneficial use in these 42 waterbodies. As part of the project, Water Board staff will continue to search for new information of fishing in additional waterbodies for which the COMM use is not already designated, and, if such new information indicates attainability, COMM will be designated for those water bodies as well.

The Water Board will continue to review new information that becomes available concerning attainability of CWA section 101(a)(2) uses in future Triennial Reviews.

RANKING DETAILS

CATEGORY: Update Beneficial Uses
PROPOSED BY: Water Board
SUPPORTED BY: Water Board
SCORE: 31
COMPLEXITY: Medium
IMPLEMENTING DIVISION: Planning
ESTIMATED PERSONNEL-YEARS (PY): 0.3
PY RUNNING TOTAL: 5.8

6. Clarify Turbidity Water Quality Objective

The Basin Plan's turbidity water quality objective is difficult to interpret:

> *Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases from normal background light penetration or turbidity relatable to waste discharge shall not be greater than 10 percent in areas where natural turbidity is greater than 50 NTU.*

This language is often subject to misinterpretation when determining whether dredging operations are negatively impacting water quality in the Bay. The language can be

improved for clarity as well as consistency with turbidity objectives found in the Basin Plans from other regions.

The project would also revise the objective to state also that waste discharges should not increase normal background light penetration and clarify how to regulate discharges affecting turbidity under 50 NTU. Because improving this language would require only minor clarifying changes, this project could also be accomplished as part of another Basin Plan project.

RANKING DETAILS

CATEGORY: Update Water Quality Objective

PROPOSED BY: Water Board

SUPPORTED BY: Water Board, Bay Area Clean Water Agencies (BACWA)

SCORE: 28

COMPLEXITY: Medium

IMPLEMENTING DIVISION: Planning, NPDES

ESTIMATED PERSONNEL-YEARS (PY): 0.5

PY RUNNING TOTAL: 6.3

7. Evaluate and Refine Shellfish Harvesting Beneficial Use

Most segments of San Francisco Bay are currently designated appropriate for commercial and recreational shellfish uses (SHELL). There are currently no commercial shellfish beds in San Francisco Bay. However, there are commercial shellfish beds in the Region in Tomales Bay and along the coast at Point Reyes National Seashore. The Basin Plan identifies water quality objectives for shellfishing using a bacterial indicator, measured as fecal coliforms or total coliforms. The objectives are stringent because they are based on protection of commercial shellfish beds for human health consumption. When bacterial indicator data are collected and assessed to determine if water bodies are meeting water quality standards, waters may be placed on the impaired waters list if they are not meeting the stringent shellfish standards even if no commercial or recreational shellfishing occurs.

This project would involve refining the spatial and temporal patterns of shellfish harvesting uses, particularly in San Francisco Bay and its marinas. The project may also include refinement of the beneficial use definition to distinguish between commercial and recreational shellfishing as well as the collection of information to support a reference/natural source implementation option for SHELL. The project would result in a Basin Plan amendment to refine the SHELL beneficial use in specific water bodies targeted in San Francisco Bay.

RANKING DETAILS

CATEGORY: Update Beneficial Uses

PROPOSED BY: Water Board

SUPPORTED BY: Water Board, San Francisco Public Utilities Commission (SFPUC), Bay Area Clean Water Agencies (BACWA), EOA, Inc.

SCORE: 26

COMPLEXITY: Medium

IMPLEMENTING DIVISION: Planning

ESTIMATED PERSONNEL-YEARS (PY): 1.0

PY RUNNING TOTAL: 7.3

8. Lake Merced pH Site-Specific Objective Project

Lake Merced is a small, eutrophic (nutrient-enriched) urban lake in San Francisco that is currently listed as impaired by low dissolved oxygen and high pH. Daly City is developing a capital project to address storm-related flooding that currently occurs in the Vista Grande Drainage Basin. The project would capture existing stormwater and authorized non-stormwater runoff that is currently conveyed to the Pacific Ocean and use the water to augment water levels in Lake Merced. The increased water levels and other associated lake management efforts (e.g., routing water into a treatment wetland prior to discharge into Lake Merced) may offer some water quality improvements but not enough to remedy the impairments based on existing water quality objectives. This Basin Plan project would explore a site-specific water quality standards action (Chapter 3) for pH based on water quality factors unique to Lake Merced. There are USEPA freshwater criteria having a range of 6.5 to 9, which is a slightly larger range than the current Basin Plan objective range of 6.5 to 8.5. The project may also memorialize Lake Merced water quality management efforts in Chapter 4 of the Basin Plan.

RANKING DETAILS

CATEGORY: Update Water Quality Objectives

PROPOSED BY: City of Daly City

SUPPORTED BY: City of Daly City

SCORE: 25

COMPLEXITY: Medium

IMPLEMENTING DIVISION: Planning, NPDES

ESTIMATED PERSONNEL-YEARS (PY): 1.0

PY RUNNING TOTAL: 8.3

9. Clarify Implementation Requirements for Municipal Supply and Agricultural Supply Water Quality Objectives

The Basin Plan should be revised to update the primary and secondary maximum contaminant levels (MCLs) listed in Table 3-5 and clarify appropriate implementation measures for the secondary MCLs. Basin Plan section 3.3.22 prospectively establishes the primary and secondary MCLs specified in Title 22 of the California Code of Regulations as municipal supply water quality objectives. U.S. EPA developed the secondary MCLs as non-mandatory drinking water standards to guide public water systems in managing drinking water for aesthetic considerations, such as taste, color,

and odor; concentrations above secondary MCLs do not necessarily present human health risks. When these objectives were originally included in the Basin Plan, the administrative record provided some background information about their implementation. The MUN and AGR objectives were “meant to be applied at the tap because the level of water treatment or the quality/quantity of blending water could vary significantly. If necessary, exemptions from achieving these objectives could be granted if a consistent level of treatment or blending could be demonstrated.” Finally, the project would consider an update to allow analysis of samples passed through a 1.5-micron filter to account for the common filtering process used in drinking water systems.

The Basin Plan should also clarify appropriate implementation measures for the agricultural supply water quality objectives listed in Table 3-6. The Basin Plan does not currently explain how to implement “threshold values” versus “limits.” The update should clarify that the objectives in Table 3-5 are implemented as long-term averages (unlike aquatic life objectives).

RANKING DETAILS

CATEGORY: Update Water Quality Objectives
PROPOSED BY: Water Board
SUPPORTED BY: Water Board, Bay Area Clean Water Agencies (BACWA)
SCORE: 21
COMPLEXITY: Medium
IMPLEMENTING DIVISION: Planning, NPDES
ESTIMATED PERSONNEL-YEARS (PY): 0.5
PY RUNNING TOTAL: 8.8

10. Santa Clara Valley Water Contact Recreation (REC-1) Standards Study

The contact recreation (REC-1) beneficial use is defined in chapter 2 of the Basin Plan as follows:

> *Uses of water for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, whitewater activities, fishing, and uses of natural hot springs.*

Section 101(a)(2) of the Clean Water Act states that, as an interim goal, water quality should provide for the protection and propagation of fish, shellfish and ***recreation*** in and on the water, wherever attainable. The Water Quality Standards regulations effectively establish a "*rebuttable presumption*" that the CWA 101(a)(2) uses are attainable and therefore must be assigned to a water body, unless a State or Tribe affirmatively

demonstrates, with appropriate documentation, that such uses are not attainable.[2] Consistent with this rebuttable presumption, the REC-1 use has been assigned to nearly all the water bodies in the Basin Plan.

This candidate project consists of an evaluation of the REC-1 designations for creeks and channels in Santa Clara County. The first phase of the project would be to identify scientific studies and technical data collection activities necessary for the review of REC-1 designations in these creeks and channels. The purpose of these studies and data collection activities would be to determine if there is compelling evidence that the REC-1 use is not attainable in specific waterbodies in Santa Clara Valley. Subsequent project phases may involve a review of water quality objectives to protect the REC-1 use as well as implementation strategies to achieve these water quality objectives.

The evaluation would likely require the participation of Water Board staff, U.S. EPA staff, Santa Clara Valley Urban Runoff Pollution Prevention Program staff, impacted permittees in Santa Clara Valley, environmental advocacy groups, and other interested stakeholders. If the project results in information that affirmatively demonstrates that the REC-1 use is not attainable in certain waterbodies, a Basin Plan amendment would be developed to modify the REC-1 designations and associated water quality objectives where appropriate as well as establish corresponding implementation measures.

RANKING DETAILS

CATEGORY: Update Beneficial Uses
PROPOSED BY: Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP)
SUPPORTED BY: Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP)
SCORE: 12
COMPLEXITY: High
IMPLEMENTING DIVISION: Planning
ESTIMATED PERSONNEL-YEARS (PY): 1.5
PY RUNNING TOTAL: 10.3

[2] Key Concepts Module 2: Use (Water Quality Standards: Regulations and Resources). https://www.epa.gov/wqs-tech/key-concepts-module-2-use

STAFF REPORT

APPENDIX B: REVIEW OF NEW OR REVISED NATIONAL RECOMMENDED WATER QUALITY CRITERIA (CLEAN WATER ACT SECTION 304(a) CRITERIA RECOMMENDATIONS)

State Water Board Review of Section 304(a) Criteria

The U.S. EPA provides scientific recommendations to states and tribes, under section 304(a) of the Clean Water Act (CWA), regarding acceptable levels of pollutants in water to protect aquatic life and human health. The CWA 304(a) recommended criteria provide guidance to states and tribes for setting water quality standards and managing pollutant discharges into waterways. These recommended criteria are intended to be protective of beneficial uses in general, but do not account for site-specific water quality factors. States and tribes may adopt the recommended criteria, site-specific objectives that take these water body-specific factors into account, or adopt other criteria based on sound scientific rationale. 40 C.F.R. § 131.11. Site-specific factors can result in water quality objectives that are lower or higher than the 304(a) recommendation, but that are still appropriate to protect beneficial uses in that water body.

U.S. EPA recommends 304(a) criteria for human health and aquatic life, as presented below:

Link to 304(a) human health criteria: National Recommended Water Quality Criteria - Human Health Criteria Table | US EPA

Link to 304(a) aquatic life criteria: National Recommended Water Quality Criteria - Aquatic Life Criteria Table | US EPA

CWA section 303(c)(2)(B) provides that whenever a state reviews water quality standards during a triennial review or revises or adopts new water quality standards, a state shall adopt criteria for toxic pollutants for which criteria have been published under CWA section 304(a), the discharge or presence of which in the affected waters could reasonably be expected to interfere with those designated uses adopted by the State, as necessary to support designated beneficial uses. The U.S. EPA promulgated the National Toxics Rule (NTR) and the California Toxics Rule (CTR) to bring states and California in compliance with CWA section 304(c)(2)(B). 57 Fed. Reg. 60848 (1992) and 65 Fed. Reg. 31682 (2000). Federal regulations at 40 CFR § 131.20(a) provide that states hold public hearings once every three years for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards. It states that if a state "does not adopt new or revised criteria for parameters for which EPA has published new or updated CWA section 304(a) criteria recommendations, then the [s]tate shall provide an explanation when it submits the results of its triennial review" to EPA consistent with CWA section 303(c)(1) and 40 CFR section 131.20(c).

The State Water Resources Control Board (State Water Board) is in the process of reviewing federally promulgated water quality standards for California and Clean Water Act section 304(a) recommended criteria.[1] A working draft comprehensive comparison

[1] Fact Sheet: An Overview of the 2024 Review State Water Quality Control Plans and State Policies for Water Quality Control

table of the U.S. EPA's California Toxics Rule Criteria, Water Quality Objectives Established by the Water Boards, and U.S. EPA Recommended Clean Water Act section 304(a) criteria has been developed to assist the public in comparing various federal water quality standards and criteria to California's water quality objectives. The San Francisco Bay Regional Water Quality Control Board's (Water Board) draft September 2024 Triennial Review Staff Report erroneously identified seven pollutants[2] for which CWA section 304(a) recommended criteria are available but that were not included in the CTR. In fact, the CTR does contain criteria for three of the seven (arsenic, selenium, and zinc). The other four are in the CTR, but U.S. EPA did not promulgate criteria (U.S. EPA stated in the CTR that to protect against certain contaminants effects on human health, the state's narrative criteria should be used in the absence of CTR criteria). In addition, a commenter identified CWA 304(a) recommended criteria for two additional pollutants, acrolein and tributyltin,[3] that are not contained in the CTR. The State Water Board will review the 304(a) recommended criteria for these nine pollutants as part of its review of all CWA 304(a) recommended criteria, irrespective of whether the criteria appear in the CTR. The Water Board will rely on State Water Board's ongoing and planned statewide efforts[1] to review the recommended CWA section 304(a) criteria and statewide water quality objectives.

In addition to the Triennial Review, the Water Board continually considers and evaluates the protectiveness of existing water quality standards through several programs, which in turn inform triennial reviews. For example, as part of preparing the San Francisco Bay Region's section of California's Integrated Report, Water Board staff assess all available surface water quality data in comparison to available water quality objectives and, for those pollutants lacking numeric objectives, a numeric translation of narrative objectives to protect beneficial uses. Water Board staff consider the protectiveness of available objectives, particularly for those pollutants where available data suggest possible impairment. Additionally, all National Pollutant Discharge Elimination System (NPDES) wastewater permits include an analysis (reasonable potential analysis) to determine if the discharge could cause or contribute to an exceedance of applicable water quality objectives. These reasonable potential analyses provide a means of identifying pollutants that may be near applicable objectives and would spur an intensified assessment of the applicability and protectiveness of the objectives for such pollutants. Finally, the Water Board requires discharge monitoring in NPDES and other permits and requires receiving water monitoring. Receiving water in San Francisco Bay is collected through the Regional Monitoring Program, a world-renowned monitoring program that

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[2] These seven pollutants are: arsenic, chloroform, 3-Methyl-4-Chlorophenol, 1,1,1-Trichloroethane, 1,2,4-Trichlorobenzene, selenium, zinc.

[3] Tributyltin is a heavily restricted antifouling agent for watercraft. U.S. EPA has published 304(a) criteria in water for protection of aquatic life, Ambient Aquatic Life Water Quality Criteria for Tributyltin (EPA 822-R-03-031, December 2003). These criteria have not yet been adopted into the Basin Plan, but the criteria document is cited for informational purposes in footnotes to Basin Plan Tables 3-3 (marine objectives) and 3-4 (freshwater objectives). These 304(a) aquatic life criteria will be reviewed by State Water Board.

has been collecting a wide variety of data to characterize pollutants in water, sediment, and biota throughout San Francisco Bay for over twenty-five years. The Water Board actively evaluates the receiving water data to identify pollutants that may be impacting beneficial uses as well as whether the existing standards are adequately protective. The Water Board pays special attention to available data for pollutants for which SSOs have been established to confirm that the required implementation program (for the SSO) is effective at maintaining ambient concentrations well below the SSO.

Site-Specific Objectives in the San Francisco Bay Region

This document summarizes the Water Board's review of all site-specific objectives (SSOs) in the Basin Plan to evaluate if any of those objectives should be revised. The table at the end of this document provides a summary and comparison of these SSOs (and other unique water quality objectives) to the CTR and recommended 304(a) criteria. In 2000, U.S. EPA promulgated the CTR prescribing numeric water quality criteria for priority toxic pollutants. However, the CTR did not replace aquatic life criteria for 12 toxic pollutants[4] adopted by the San Francisco Regional Water Quality Control Board prior to 1986 and contained in Tables III-2A and III-2B of the 1986 Basin Plan. In 2004, the Water Board approved a Basin Plan amendment to replace the objectives for eight of these pollutants (arsenic, cadmium, chromium, copper (freshwater only), lead, nickel, silver, and zinc) to be consistent with the CTR. In subsequent amendments, the Basin Plan's marine copper objectives were replaced with the CTR criteria. For these eight pollutants, the Water Board will rely on the State Water Board's review of 304(a) recommended criteria to determine if revisions to the CTR values are necessary.

Since 1986, the Water Board has adopted SSOs for copper, cyanide, nickel, and mercury in specific water bodies. The scientific basis of each SSO was reviewed by a panel of independent subject matter experts, and the SSOs were reviewed and approved by U.S. EPA. The following sections describe the status of Basin Plan objectives for the four pollutants (cyanide, mercury, selenium, and PAHs) that were not replaced with CTR values and the four water body-specific SSOs adopted since 1986. Additionally, we review the protectiveness of the Basin Plan's un-ionized ammonia objectives, the toxic form of ammonia.

Copper: This section contains an evaluation of water quality objectives in the San Francisco Bay Region's Basin Plan for copper in light of the 304(a) recommended water quality criteria for copper to protect human health and aquatic life.

The 304(a) recommended criterion for human health was last updated in 1992 and is identical to CTR human health criterion of 1300 µg/L. The San Francisco Bay Region's Basin Plan objective to protect municipal supply (1000 µg/L) is more stringent than the

[4] The 12 pollutants are: arsenic, cadmium, chromium (vi), copper, cyanide, lead, mercury, nickel, silver, selenium, zinc, PAHs.

CWA 304(a) human health criterion and, therefore, is more stringent and protective and does not need to be revised.

The Basin Plan contains non-site specific freshwater dissolved copper objectives to protect aquatic life equivalent to those in the CTR (1-hour average of 13 µg/L and a 4-day average of 9 µg/L). However, there are no identified 304(a) recommended freshwater aquatic life criteria for copper to easily compare to these objectives. Rather, U.S. EPA recommends that states develop site specific criteria using the Biotic Ligand Model to account for water body-specific chemical parameters (temperature, pH, dissolved organic carbon, major cations and anions, and alkalinity). Prior to the development of the Biotic Ligand Model, laboratory toxicity tests were commonly used to assess the site water characteristics to determine appropriate copper SSOs. The Biotic Ligand Model and other similar approaches are alternative means to address the same phenomena through a model of the biological toxicity instead of direct measurement of toxicity using laboratory tests. The State Water Board is currently developing procedures to calculate copper (and zinc) freshwater SSOs for use in basin plans using the Biotic Ligand Model and that process is not yet complete. Once these procedures are complete, the Water Board will evaluate whether water quality objectives to protect freshwater aquatic life continue to be appropriate and protective. Currently, there is no evidence to suggest either that current copper water quality objectives are not appropriate and protective or that the discharge of copper in freshwaters could reasonably be expected to interfere with aquatic life beneficial uses.

The San Francisco Bay Region's Basin Plan contains marine site-specific copper objectives that apply to specific segments of San Francisco Bay[5] to protect aquatic life (See Basin Plan Table 3-3A). The 304(a) recommended criteria are the same as the CTR and the Water Board considered and modified them to reflect site-specific conditions, consistent with 40 CFR section 131.11(b). The marine SSOs were based on U.S. EPA-approved procedures to develop SSOs by directly measuring toxicity on the most copper-sensitive resident organism (blue mussel larvae) in the subject waters using laboratory tests. These studies result in the quantification of a water effects ratio (WER) that accounts for the degree to which chemical characteristics of segments of San Francisco Bay reduces the toxicity of copper. The water effects ratio was then applied to the default marine aquatic life copper objectives from the CTR, which are equivalent to the current CWA 304(a) criteria to protect marine aquatic life. By following U.S. EPA-approved SSO calculation procedures to evaluate the degree to which

[5]An acute (one hour average) dissolved copper objective of 10.8 µg/L and a chronic (four-day average) dissolved copper objective of 6.9 µg/L applies to the portion of Lower San Francisco Bay south of the line representing the Hayward Shoals shown on figure 7.2.1-1 in the Basin Plan and throughout South San Francisco Bay (south of the Dumbarton Bridge). An acute (one hour average) dissolved copper objective of 9.4 µg/L and a chronic (four-day average) dissolved copper objective of 6.0 µg/L applies to the portion of the delta located in the San Francisco Bay Region, Suisun Bay, Carquinez Strait, San Pablo Bay, Central San Francisco Bay, and the portion of Lower San Francisco Bay north of the line representing the Hayward Shoals on figure 7.2.1-1 of the Basin Plan.

segments of San Francisco Bay water reduces the copper toxicity on the most copper-sensitive resident aquatic organism, the resulting SSOs also protect other, less sensitive, aquatic organisms in San Francisco Bay. Accordingly, the marine copper site-specific water quality objectives in the Basin Plan are appropriate and protective of aquatic life in the segments of San Francisco Bay where the objectives apply and the discharge of copper could not reasonably be expected to interfere with beneficial uses in these waters. To this point, copper concentration data are collected periodically throughout San Francisco Bay through the Regional Monitoring Program for Water Quality[6], and the rolling average of these data are compared to trigger levels[7], which are well below the SSOs, established as part of the monitoring plan for the SSOs. The rolling average concentrations in all parts of the Bay have remained below the trigger levels since the SSOs were adopted, assuring the protection of beneficial uses.

For other marine waters in the San Francisco Bay Region for which the SSOs do not apply, the acute and chronic copper objectives are equivalent to those found in the CTR and current CWA 304(a) recommended aquatic life criteria.

Cyanide: This section includes a description of the evaluation of water quality objectives in the San Francisco Bay Region's Basin Plan for cyanide in light of the 304(a) recommended water quality criteria for cyanide to protect human health and aquatic life.

U.S. EPA updated the 304(a) recommended criteria for cyanide for protection of human health in 2015. This criteria are significantly lower than the CTR human health criteria. Since this criteria pertains to a statewide water quality objective, the State Water Board will review the 304(a) recommended criteria for cyanide as part of its review of statewide water quality objectives.

The 304(a) recommended freshwater and saltwater aquatic life criteria for cyanide were published in 1985. In 2000, the CTR included freshwater and saltwater aquatic life criteria for cyanide equivalent to the 1985 recommendations.

The 304(a) recommended freshwater criteria for cyanide are the same as the Basin Plan freshwater quality objectives promulgated under the NTR (chronic value of 5.2 µg/L, acute value of 22 µg/L acute). The water quality objectives are as protective as the 304(a) criteria and do not need to be revised.

The Basin Plan's marine water quality objectives for cyanide are based on the NTR water quality criteria and apply to marine waters in the San Francisco Bay Region excluding San Francisco Bay (e.g., Tomales Bay). The NTR criteria are equivalent to the 304(a) criteria and do not need to be revised as they are as protective. However,

[6] https://www.sfei.org/programs/rmp
[7] https://www.sfei.org/content/copper-site-specific-objective-3-year-rolling-averages

these criteria do not apply to the San Francisco Bay, so we evaluated the water quality objectives for cyanide in the Basin Plan relative to the recommended criteria.

The Basin Plan contains two marine water quality objectives for cyanide in San Francisco Bay (Table 3-3C). Both the chronic objective (2.9 µg/L) and acute objective (9.4 µg/L) are numerically higher than the CWA 304(a) saltwater aquatic life acute (1 µg/L) and chronic (1 µg/L) criterion. The CWA 304(a) criteria for cyanide were driven by toxicity data for the eastern rock crab (*Cancer irroratus),* a species not found on the West Coast. In contrast, the Basin Plan SSOs were developed through a U.S. EPA-recognized recalculation procedure applied to the national toxicity database with additional acute and chronic cyanide toxicity data for four *Cancer* crab species resident in San Francisco Bay, deleting data from an east coast *Cancer* crab species, and recalculating the criteria values. Accordingly, the SSO is protective of the most sensitive species of aquatic life in the San Francisco Bay even though the SSOs are numerically higher than the CWA 304(a) and default CTR criteria.

The site-specific marine aquatic life objectives for cyanide in San Francisco Bay were approved by the U.S. EPA in 2008 and remain protective of beneficial uses in San Francisco Bay. Based on monitoring data, the concentrations of cyanide in the Bay have remained below the section 304(a) recommended criteria and there is no evidence of any adverse impacts to aquatic life in the Bay from cyanide. Moreover, cyanide does not persist in natural waters and does not bioaccumulate in biota. Therefore, the discharge of cyanide in San Francisco Bay could not reasonably be expected to adversely affect aquatic life beneficial uses.

Mercury: This section includes a description of the evaluation of water quality objectives in the San Francisco Bay Region's Basin Plan for mercury in light of the 304(a) recommended water quality criteria for mercury to protect human health and aquatic life.

For human health, the U.S. EPA issued the 304(a) criterion for methylmercury in 2001. This criterion is expressed as a fish and shellfish tissue concentration rather than a concentration in water and provided guidance for its implementation.[8] In 2001, the CTR promulgated human health criteria for mercury in water (i.e., in aqueous solution rather than in fish tissue).

To protect freshwater and saltwater aquatic life, the U.S. EPA published 304(a) recommended criteria for mercury in water in 1995. In 2001, the CTR promulgated criteria did not include criteria for aquatic life.

In 2006 and 2008, the Water Board adopted mercury and methylmercury SSOs to protect human health and aquatic life. The San Francisco Bay Basin Plan sets forth both marine and freshwater water quality objectives (Tables 3-3 and 3-3B and Tables 3-

[8] U.S. Environmental Protection Agency (USEPA) 2001. *Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion,* EPA-823-R-10-001, Office of Science and Technology.

4 and 3-4A). In the Bay Area, humans and wildlife that consume fish are the most sensitive receptors of mercury exposure (SFEI, 2003; Davis et al., 2012).[9,10] In alignment with U.S. EPA guidance and recognizing that the primary mercury risk is to humans and wildlife that consume fish, the Water Board adopted SSOs to include fish tissue mercury concentration objectives to protect aquatic life and human health beneficial uses.

In the 2024 Integrated Report, there was an evaluation of all available San Francisco Bay region freshwater and saltwater mercury water column data in comparison to CTR, 304(a), and Basin Plan mercury objectives.[11]The only exceedances of ***any*** water column mercury objectives occurred in Walker Creek in Marin County, which is a creek draining the Gambonini Mercury Mine Superfund site.[12] Notably, water column mercury data for all other mercury-impaired waters (e.g., segments of San Francisco Bay) did not exceed Basin Plan, CTR, or 304(a) objectives, but fish tissue data do exceed tissue objectives to protect human consumers and wildlife. These data underscore the previous point that mercury tissue concentrations are a more direct indicator to assess beneficial use protection for mercury.

U.S. EPA's 304(a) water column criteria for mercury from 1995 does not reflect the latest science that the primary risks to beneficial uses from mercury is fish tissue concentrations, not water column standards. It is, therefore, inappropriate and unnecessary to adopt them into the Basin Plan because the existing fish tissue water quality objectives in the Basin Plan more directly protect the most sensitive endpoint in the region's mercury-impacted waters. The Basin Plan SSOs rely on fish tissue concentrations, which is a more direct measure of risk to humans and wildlife that consume fish in the region and is, therefore, more directly protective. The 1995 304(a) water column criteria are a less reliable measure of such risk because these criteria must be derived from fish tissue concentrations using default bioconcentration factors that are not water-body specific.

As described above, the San Francisco Bay Basin Plan contains SSOs for mercury (Table 3-3B) and methylmercury (Table 3-4A) based on fish tissue concentrations that were approved in 2006 for the San Francisco Bay and 2008 for Walker Creek, Soulajoule Reservoir, and their tributaries; and in waters of the Guadalupe River watershed, except Los Gatos Creek and its tributaries upstream of Vasona Dam, Lake

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[9] San Francisco Estuary Institute (SFEI) 2003. *Contaminant Concentrations in Fish from San Francisco Bay, 2000*, prepared by B. Greenfield, J. Davis, R. Fairey, C. Roberts, D. Crane, G. Ichikawa, and M. Petreas, RMP Technical Report: SFEI Contribution 77.

[10] Davis, J. A., Looker, R. E., Yee, D., Marvin-Di Pasquale, M., Grenier, J. L., Austin, C. M., McKee, L. J., Greenfield, B. K., Brodberg, R., & Blum, J. D. (2013). Reducing methylmercury accumulation in the food webs of San Francisco Bay and its local watersheds. *Environmental Research, 119*, 3-26.

[11] https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2024-integrated-report.html

[12] https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0905389

Elsman, Lexington Reservoir, and Vasona Lake. The mercury and methylmercury SSOs continue to effectively protect beneficial uses and do not require replacement with 304(a) fish tissue criteria or further revision. These objectives remain appropriately protective, as they are based on local fish consumption data and consider the unique wildlife species of the San Francisco Bay Region.

For San Franciso Bay (Table 3-3B), one SSO was developed for the protection of human health (0.2 mg/kg in trophic level 3 and 4 fish) and a second SSO was developed for the protection of aquatic organisms and wildlife (0.03 mg/kg in whole fish 3 to 5 cm in length). The human health water quality objective was calculated using detailed local consumption data for San Francisco Bay rather than using the default fish intake rate provided by the U.S. EPA and was obtained from a survey conducted by the U.S. Department of Agriculture administered to a general population of fish consumers and is, therefore, protective of residents in the region. In addition, the objective considers mercury concentrations in the most consumed San Francisco Bay fish. The objective (0.2 mg/kg wet weight fish tissue) is more stringent than the 304(a) recommended criteria (0.3 mg/kg wet weight fish tissue). Regarding the second objective to protect aquatic organisms and wildlife, the U.S Fish and Wildlife Service (USFWS) concluded that mercury concentrations of about 0.03 mg/kg in smaller prey fish comprising the California least tern diet would be protective for the beneficial use of the preservation of rare and endangered species.[13] The California least tern was identified by USFWS as one of the local wildlife species with the greatest inherent risk from exposure to methylmercury, and was a species not considered in U.S. EPA's 304(a) criteria. Besides being based on local, endangered species, this SSO is 10 times more stringent than the CWA 304(a) human health criterion, which is 0.3 mg/kg in fish.

For Walker Creek and Guadalupe River watersheds (Table 3-4A), the objectives were calculated to protect piscivorous birds, the most sensitive methylmercury receptor in the watershed. Piscivorous birds consume more fish and have a smaller body weight than humans. As a result, these objectives also protect humans who consume fish from the Walker Creek and Guadalupe River watersheds. The fish methylmercury thresholds used in these SSOs were developed by USFWS with assistance from biologists at the Santa Clara Valley Water District regarding local species present in the watershed.[14] The Basin Plan's mercury water quality objectives in Table 3-4A to protect aquatic organisms and wildlife are 0.05 mg/kg in whole trophic level 3 fish 5 to 15 cm in length, and 0.1 mg/kg in whole trophic level 3 fish 15 to 35 cm in length. These SSOs are more stringent than the CWA 304(a) human health criterion, which is 0.3 mg/kg in fish.

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[13] U.S. Fish and Wildlife Service (USFWS) 2003. Evaluation of the Clean Water Act Section 304(a) Human Health Criterion for Methylmercury: Protectiveness for Threatened and Endangered Wildlife in California.

[14] U.S. Fish and Wildlife Service (USFWS) 2005. Derivation of Numeric Wildlife Targets for Methylmercury in the Development of a Total Maximum Daily Load for the Guadalupe River Watershed.

Mercury water quality objectives for all other waters in the region are found in the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California.[15] These objectives were adopted in 2017 based on fish species found in California and these objectives are also more stringent than the CWA 304(a) human health criterion of 0.3 mg/kg. The State Water Board will review the protectiveness of those objectives in relation to CWA 304(a) criteria.

Nickel: The Basin Plan's nickel objective in Table 3-5 to protect municipal supply (100 µg/L) is more stringent than the CWA 304(a) recommended human health nickel criterion (610 µg/L). The Basin Plan contains freshwater dissolved nickel objectives to protect aquatic life (1-hour average of 470 µg/L and a 4-day average of 52 µg/L) equivalent to recommended CWA 304(a) criteria, which are also equivalent to those in the CTR.

The Basin Plan (Table 3-3A) contains site-specific marine nickel objectives that protect aquatic life in South San Francisco Bay (1-hour average of 62.4 µg/L and a 4-day average of 11.9 µg/L). The 304(a) recommended criteria are the same as the CTR and the Water Board considered and modified them to reflect site-specific conditions to establish the SSOs, consistent with 40 CFR section 131.11(b). The nickel SSOs were not computed in the same manner as those for copper, where an adjustment factor (WER) is applied to a default value (CTR criterion). Rather, these nickel SSOs were developed through an U.S. EPA-recognized recalculation procedure applied to the national toxicity database augmented with additional acute and chronic nickel toxicity data for marine organisms resident in South San Francisco Bay. The recalculation procedure involved replacing some species in the nickel toxicity database with resident species and then applying the statistical method prescribed in the section 304(a) criteria document to the revised species toxicity data to calculate the objectives. In this fashion, the data used for the SSO calculation better represents the sensitivity of aquatic organisms actually found in South San Francisco Bay, and careful application of the statistical method defined in the criteria document ensures that the derived SSOs will be protective of these aquatic species. Accordingly, the marine nickel SSOs are protective of aquatic life in South San Francisco Bay even though the SSOs are numerically higher than the CWA 304(a) and default CTR criteria. The marine nickel SSOs are specifically tailored to protecting aquatic life in South San Francisco Bay and the discharge of nickel in South San Francisco Bay could not be reasonably be expected to interfere with aquatic life beneficial uses. To this point, available water quality data collected in South San Francisco Bay through the Regional Monitoring Program since adoption of the SSOs indicate that the mean dissolved nickel concentration of over 300 samples collected is 1.94 µg/L, far below the chronic SSO of 11.9 µg/L. In 2011, there was a single anomalous value exceeding the chronic SSO but still far below the acute SSO of 62.4 µg/L. The next highest measured value in the South San Francisco Bay data was

[15] Statewide Mercury Provisions | California State Water Resources Control Board

6.2 µg/L.[16] Thus, the monitoring data show that nickel concentrations in the South Bay are generally well below levels that can interfere with aquatic life beneficial uses.

Ammonia: The Basin Plan contains an annual median SSO of 0.025 mg/L (as nitrogen) for un-ionized ammonia, the toxic form of ammonia. The Basin Plan also contains a maximum value for the portions of the Bay from Central Bay northward of 0.16 mg/L (as nitrogen) and 0.4 mg/L (as nitrogen) for Lower San Francisco Bay. The proportion of total ammonia that exists in the toxic, un-ionized form varies with the pH and temperature of water so there is no fixed value of a numeric objective expressed as total ammonia. Rather, the freshwater and saltwater 304(a) ammonia criteria are expressed as total ammonia, but the numeric value of the total ammonia objective to protect aquatic life is calculated from a formula that converts an un-ionized ammonia concentration derived from laboratory toxicity tests into a corresponding total ammonia concentration by accounting the pH and temperature dependence of the ammonia toxicity.

The Basin Plan's un-ionized ammonia objectives are implemented in NPDES wastewater permits by computing corresponding total ammonia effluent limitations because effluent and receiving water data are available for total ammonia, but not un-ionized ammonia. The fraction of total ammonia that exists in the toxic un-ionized form depends on pH and temperature of the receiving water, so pH and temperature data collected at a representative Bay sampling location are used to compute the un-ionized fraction of the total ammonia using equations from the saltwater ambient criteria document.[17] Therefore, the temperature and pH factors determining the concentration of the toxic form of ammonia expressed in the criteria documents (for the saltwater 304(a) criteria) must be used when computing the effluent limitations in NPDES wastewater permits.[18, 19]

The 304(a) saltwater total ammonia criteria are calculated to ensure that four-day average (chronic) un-ionized ammonia concentration does not exceed 0.035 mg/L more than once every three years on average and that the one-hour average (acute) un-ionized ammonia concentration does not exceed 0.233 mg/L more than once every three years on average.[17] Regional Monitoring Program ammonium (the non-toxic form)

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[16] Data spreadsheet containing dissolved nickel data collected in South San Francisco Bay through the Regional Monitoring Program from 2002-2013. Downloaded from https://cd3.sfei.org/

[17] Ambient Water Quality Criteria for Ammonia (Saltwater)–1989, EPA Publication 440/5-88-004, 1989

[18] Moreover, for ammonia, conservative estimates of actual initial dilution are typically used to compute effluent limitations because ammonia is a non-persistent pollutant that quickly disperses and degrades to a non-toxic state. These dilution values specific to individual dischargers are used, in accordance with the State Implementation Policy (SIP) section 1.4, to compute effluent limits to protect against acute exposures (maximum daily effluent concentration) and chronic exposures (average monthly effluent concentration) for total ammonia.

[19] See, e.g., National Pollutant Discharge Elimination System (NPDES) Permit for Sewerage Agency of Southern Marin Wastewater Treatment Plant, Order R2-2023-0021 NPDES Permit CA0037711.

data at 22 stations collected from 1995 to 2002 (491 individual measurements)[20] were converted to un-ionized ammonia concentrations for comparison to both the Basin Plan un-ionized ammonia objectives as well as the underlying un-ionized ammonia bases for the 304(a) total ammonia objectives. The table below shows the results of the data assessment by water body in terms of exceedances of each objective and the number of samples for each type of objective available for comparison.

Embayment	Basin Plan annual median (0.025 mg/L)	Basin Plan maximum (0.16 or 0.4 mg/L depending on location)	304(a) chronic (0.035 mg/L)	304(a) acute (0.233 mg/L)
Central Bay	0 of 10	0 of 92	0 of 92	0 of 92
Lower Bay	0 of 10	0 of 114	0 of 114	0 of 114
Mare Island Strait	0 of 9	0 of 24	0 of 24	0 of 24
Pacific Ocean	0 of 9	0 of 19	0 of 19	0 of 19
San Pablo Bay	0 of 9	0 of 91	0 of 91	0 of 91
South Bay	0 of 10	1 of 87	3 of 87	1 of 87
Suisun Bay	0 of 9	0 of 64	0 of 64	0 of 64

The only exceedances of any ammonia objectives occurred in the South Bay. Out of 87 samples in South Bay, there were single exceedances of the Basin Plan maximum concentration objective and 304(a) acute objective and three exceedances of the 304(a) chronic objective. With so few exceedances of either the Basin Plan objectives or recommended 304(a) criteria, South San Francisco Bay is far from being impaired by ammonia according to California's Listing Policy,[21] which would require eight or more exceedances of an objective in 87 samples in order to be impaired.

The preceding analysis focused on ammonium data collected 2002 and earlier, but the un-ionized ammonia concentrations have not significantly changed. The most recent available data (2003 through 2013) show that the average ammonium concentrations in all parts of San Francisco Bay are lower or unchanged compared to average concentrations for years 2002 and earlier. The table below shows the average ammonium concentrations for each embayment for these two periods.[20]

[20] Calculated Un-Ionized Ammonia Concentrations Based on RMP data. The RMP data for ammonium and the parameters needed to compute un-ionized ammonia are also in spreadsheet form.
[21] Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List, Amended February 3, 2015.

Embayment	Mean ammonium concentration (mg/L) 1995-2002	Mean ammonium concentration (mg/L) 2003-2013
Central Bay	0.094	0.099
Lower Bay	0.097	0.074
Mare Island Strait	0.11	Not available
Pacific Ocean	0.051	0.049
San Pablo Bay	0.095	0.073
South Bay	0.294	0.088
Suisun Bay	0.074	0.063

It should also be noted that the concentrations of the toxic form of un-ionized ammonia will likely continue to remain low as a result of increasing atmospheric carbon dioxide concentrations. Increasing levels of carbon dioxide in the atmosphere lead to increasing dissolved carbon dioxide concentrations in the Pacific Ocean, which makes water more acidic. Deeper waters have more dissolved carbon dioxide and are more acidic. Wind-driven upwelling of this deeper, acidic water will continue causing California's coastal waters to be more acidic.[22] These lower pH coastal ocean waters are transported landward through the Golden Gate during high tides and mix with Bay water. As the coastal ocean continues to become more acidic, San Francisco Bay pH will likely become lower (more acidic) as a result of this mixing. The proportion of total ammonia in the toxic, un-ionized form decreases as pH decreases.[17]

Based on the above assessment of ambient ammonia data and how the Basin Plan ammonia objectives must be implemented in NPDES wastewater permits using translation information from the 304(a) criteria source document, the current SSOs are protective of beneficial uses. The discharge of ammonia in San Francisco Bay could not be reasonably be expected to interfere with aquatic life beneficial uses.

Within freshwaters, the Water Board already uses the recommended CWA 304(a) ammonia criteria when evaluating water quality data to identify impaired waters when there are sufficient ancillary data (e.g., pH and temperature) to compute the total ammonia criterion according to the appropriate formula in the criteria documents. For all 187 San Francisco Bay Region waterbodies for which ammonia data were evaluated in the 2024 Integrated Report, the evaluations included consideration of both the Basin Plan un-ionized ammonia objectives as well as the 304(a) criterion calculated based on temperature and pH. Of these 187 water bodies, seven were determined to be impaired (not achieving water quality standards) according to the procedures provided in

[22] https://oehha.ca.gov/epic/climate-change-drivers/acidification-coastal-waters

California's Listing Policy,[23] The proportion of samples exceeding the Basin Plan's un-ionized ammonia objective equaled or exceeded the proportion of samples exceeding the calculated 304(a) total ammonia criterion. This means that there were no impairments identified solely by virtue of comparison to the 304(a) criterion and thus, based on these 187 water quality assessments, the Basin Plan's un-ionized ammonia objective is at least as protective as the calculated 304(a) criterion. Therefore, the freshwater ammonia water quality objective in the Basin Plan continues to be appropriate and as protective of aquatic life as the 304(a) criterion.

Selenium: The U.S. EPA published the 304(a) recommended criterion for selenium in water to protect human health in 2002. The 2001 CTR promulgated criteria did not establish human health criteria for selenium. The Basin Plan objective to protect municipal supply (50 µg/L) is more stringent than the CWA 304(a) human health criterion (170 µg/L) and, therefore, is more stringent and protective and does not need to be revised.

The CWA 304(a) recommended saltwater aquatic life criteria for selenium were published in 1999. In 2001, the CTR promulgated saltwater aquatic life criteria for selenium that were equivalent to the 304(a) recommended saltwater aquatic life criteria. All saltwater aquatic life criteria were expressed solely as water column concentrations.

In 2016, the U.S. EPA published the aquatic life 304(a) recommended criterion for selenium in freshwater. This national selenium criterion was expressed as four elements: fish egg-ovary (15.1 mg/kg dry weight (dw)), fish whole-body (8.5 mg/kg dw) or muscle (11.3 mg/kg dw), water column monthly (lentic: 1.5 µg/L, lotic: 3.1 µg/L), and water column intermittent (intermittent exposure equation). This recommended criterion, however, is not appropriate for California and, therefore, U.S. EPA adopted an updated selenium water quality criterion for California. Specifically, on December 10, 2024, the U.S. EPA amended the CTR to adopt updated freshwater selenium water quality criterion applicable to certain waters of California. The revised CTR criterion is more appropriate for California when compared to the nationally recommended criteria, as it is based on species and food webs in California. This criterion comprises the following elements: bird egg tissue (11.2 mg/kg dry weight (dw)), fish tissue concentrations expressed as whole-body (8.5 mg/kg dw), skinless, boneless fillet (11.3 mg/kg dw), and fish egg-ovary (15.1 mg/kg dw), and lastly, water column criterion for lentic (1.5 µg/L) and lotic (3.1 µg/L) aquatic systems. The revised CTR criterion applies to fresh waterbodies in the San Francisco Bay Region and are, as explained above, more protective and appropriate than the national 304(a) criterion for selenium in freshwater.

The NTR marine water quality criteria are applicable to the San Francisco Bay and are more stringent than the 1999 section 304(a) recommended criteria. Moreover, the latest science on selenium fate and bioaccumulation indicates that the marine 304(a)

[23] https://www.waterboards.ca.gov/water_issues/programs/tmdl/303d_listing.html

recommended criteria are not protective of aquatic life and aquatic-dependent wildlife in the marine and estuarine waters of the San Francisco Bay and Delta. Therefore, U.S. EPA has proposed to adopt selenium water quality criteria specifically for San Francisco Bay and the Delta.[24] U.S. EPA proposed selenium criteria in fish tissue (a whole-body criterion of 8.5 micrograms per gram (µg/g) dw and a muscle criterion of 11.3 µg/g dw) and clam tissue (15 µg/g dw), to reflect biological uptake through diet, the predominant pathway for selenium toxicity, and to address reproductive toxicity. To facilitate monitoring and regulation of pollutant discharges, U.S. EPA is also proposing dissolved and particulate water column selenium criteria of 0.2 µg/L and 1 µg/g, respectively, that are designed to ensure the tissue criteria are met. Due to its pending rulemaking, U.S. EPA requested that the Water Board not undertake a selenium standards action for San Francisco Bay in the Basin Plan.

U.S. EPA's proposed criteria were developed to ensure protection of federally-listed threatened and endangered species including green sturgeon, Chinook salmon, steelhead, delta smelt, and California Ridgway's rail and are therefore more appropriate to protect beneficial uses compared to the 304(a) criteria. The science U.S. EPA relied on to develop the proposed criteria was already considered in the North Bay Selenium TMDL and the fish tissue whole-body target (8.0 µg/g dw) is less than the U.S. EPA proposed criteria (8.5 µg/g dw), while the fish muscle tissue is equivalent to the U.S. EPA proposed criteria of 11.3 µg/g dw. The North Bay TMDL is being attained and the discharge of selenium is not expected to interfere with aquatic life beneficial uses. Fish tissue is the most reliable indicator of whether fish are experiencing selenium toxicity and selenium concentrations in sturgeon, the most sensitive fish species to the toxic effects from selenium, are well below the protective TMDL target.[25] Moreover, the TMDL caps selenium loads in the North Bay to ensure that loads do not increase in the future, further ensuring the protection of aquatic life beneficial uses.

Polycyclic Aromatic Hydrocarbons (PAHs): Currently, CWA 304(a) criteria do not include total PAH for either freshwater or saltwater. Basin Plan Table 3-3 has a 24-hour average total PAH objective of 15 µg/l to protect aquatic life that is based on prior U.S. EPA guidance. Although there are no CTR or 304(a) criteria for total PAHs, the CTR and 304(a) criteria are available for individual PAH compounds (e.g., benzo[a] pyrene, anthracene, chrysene, etc.). The 304(a) and CTR criteria for these individual PAH compounds will be reviewed by State Water Board.

Total PAH concentration data in water, sediment and tissue collected in 79 waterbodies in the San Francisco Bay Region have been reviewed as part of preparing California's 303(d) lists using a variety of well-established evaluation guidelines (often in sediment) available from the scientific literature. PAH water column data from the coastal ocean

[24] Water Quality Standards: Establishment of Revised Numeric Criteria for Selenium for the San Francisco Bay and Delta, State of California | US EPA
[25] https://www.waterboards.ca.gov/about_us/docs/performance_report/fy2324/r2_nb_selenium_2324.pdf

were evaluated using the California's Ocean Plan's 30-day average total PAH concentration of 0.0088 µg/L for the protection of human health in marine waters. All other San Francisco Bay Region PAH water data were evaluated against the Basin Plan's 15 µg/l total PAH objective to protect aquatic life. PAH sediment data were evaluated using concentration thresholds (for aquatic life impacts) from the scientific literature because there are no available sediment concentration criteria.

The primary water quality concern involving PAHs is the threat to human health via consumption of contaminated fish, and the Water Board compares tissue data to a scientifically sound, risk-based evaluation guideline provided by California's Office of Health Hazard Assessment (OEHHA). There are no CTR or 304(a) criteria for the most common individual PAH compounds (e.g., benzo[a]pyrene, anthracene, chrysene, benzo[k]fluoranthene, fluoranthene, benzo[b]fluoranthene, acenapthylene) intended for the protection of aquatic life. The 1980 total PAH criteria for human health protection are expressed as water column concentrations, which are less useful than the OEHAA based tissue threshold for assessing water quality for human health protection because these water column concentrations must be derived from tissue levels using generic assumptions about bioaccumulation.

Using the evaluation guidelines just described to assess available data, there have been, to date, no waterbodies in the San Francisco Bay Region for which there has been enough evidence that aquatic life or human health beneficial uses are impaired based on the PAH water concentration objective. The State Water Board will be reviewing 304(a) criteria and determine if water column objectives for individual PAH compounds should be adopted in California, and the Water Board will rely on State Board's review and standards actions for individual PAH compounds.

Comparison Table:

Pollutant (geographic applicability of SSO)	**Basin Plan Site-Specific Objective**	**304(a) criteria (human health – water & organisms)**	**304(a) criteria (human health – organisms only)**	**304(a) criteria (aquatic life – acute)**	**304(a) criteria (aquatic life – chronic)**	**CTR (human health – water & organism)**	**CTR (human health – organism)**	**CTR (aquatic life – acute)**	**CTR (aquatic life – chronic)**
Copper (the portion of Lower San Francisco Bay south of the line representing the Hayward Shoals shown on Figure 7.2.1-1. and South San Francisco Bay)	6.9 µg/L (4-day average); 10.8 µg/L (1-hr average)	1300 µg/L (updated 1992)	NA	Not specified for freshwater Saltwater: 4.8 µg/L (updated 2007)	Not specified for freshwater Saltwater: 3.1 µg/L (updated 2007)	1300 µg/L	NA	Freshwater: 13.0 µg/L Saltwater: 4.8 µg/L	Freshwater: 9.0 µg/L Saltwater: 3.1 µg/L
Copper (the portion of the delta located in the San Francisco Bay Region, Suisun Bay, Carquinez Strait, San Pablo Bay, Central San Francisco Bay, and the portion of Lower San Francisco Bay north of the line representing the Hayward Shoals on Figure 7.2.1-1.)	6.0 µg/L (4-day average); 9.4 µg/L (1-hr average)	1300 µg/L (updated 1992)	NA	Not specified for freshwater Saltwater: 4.8 µg/L (updated 2007)	Not specified for freshwater Saltwater: 3.1 µg/L (updated 2007)	1300 µg/L	NA	Freshwater: 13.0 µg/L Saltwater: 4.8 µg/L	Freshwater: 9.0 µg/L Saltwater: 3.1 µg/L

Pollutant (geographic applicability of SSO)	**Basin Plan Site-Specific Objective**	**304(a) criteria (human health – water & organisms)**	**304(a) criteria (human health – organisms only)**	**304(a) criteria (aquatic life – acute)**	**304(a) criteria (aquatic life – chronic)**	**CTR (human health – water & organism)**	**CTR (human health – organism)**	**CTR (aquatic life – acute)**	**CTR (aquatic life – chronic)**
Nickel (South San Francisco Bay)	11.9 µg/L (4-day average); 62.4 µg/L (1-hr average)	610 µg/L (updated 1998)	4600 µg/L (updated 1998)	Freshwater: 470 µg/L Saltwater: 74 µg/L (updated 1995)	Freshwater: 52 µg/L Saltwater: 8.2 µg/L (updated 1995)	610 µg/L	4600 µg/L	Freshwater: 470 µg/L Saltwater: 74 µg/L	Freshwater: 52 µg/L Saltwater: 8.2 µg/L
Cyanide (San Francisco Bay)	2.9 µg/L (4-day average); 9.4 µg/L (1-hr average)	4 µg/L (updated 2015)	400 µg/L (updated in 2015)	Freshwater: 22 µg/L (updated 1985) Saltwater: 1 µg/L (updated 1985)	Freshwater: 5.2 µg/L (updated 1985) Saltwater: 1 µg/L (updated 1985)	700 µg/L	220,000 µg/L	Freshwater: 22 µg/L Saltwater: 1 µg/L	Freshwater: 5.2 µg/L Saltwater: 1 µg/L
Mercury (Marine Waters excluding SF Bay for 4-day average, 1-hour average applies to all marine waters in Region)	0.025 µg/L (4-day average); 2.1 µg/L (1-hr average)	NA	NA	1.8 µg/L (updated 1995)	0.94 µg/L (updated 1995)	0.050 µg/L	0.051 µg/L	NA	NA
Mercury (Freshwaters)	2.4 µg/L (1-hr average)	NA	NA	1.4 µg/L (updated 1995)	0.77 µg/L (updated 1995)	0.050 µg/L	0.051 µg/L	NA	NA

Pollutant (geographic applicability of SSO)	**Basin Plan Site-Specific Objective**	**304(a) criteria (human health – water & organisms)**	**304(a) criteria (human health – organisms only)**	**304(a) criteria (aquatic life – acute)**	**304(a) criteria (aquatic life – chronic)**	**CTR (human health – water & organism)**	**CTR (human health – organism)**	**CTR (aquatic life – acute)**	**CTR (aquatic life – chronic)**
Methylmercury (San Francisco Bay)	Human Health Protection: 0.2 mg/kg wet weight fish tissue (measured in the edible portion of trophic level 3 and trophic level 4 fish) Aquation Organisms and Wildlife Protection: 0.03 mg/kg wet weight fish tissue (measured in whole fish 3-5 cm in length)		Methylmercury: 0.3 mg/kg wet weight fish tissue (updated 2001)						
Methylmercury (Walker Creek, Soulajoule Reservoir, and Their Tributaries; and in Waters of the Guadalupe River Watershed, Except Los	Aquatic Organisms and Wildlife Protection: 0.05 mg/kg methylmercury wet weight fish tissue (measured in whole trophic		Methylmercury: 0.3 mg/kg wet weight fish tissue (updated 2001)						

Pollutant (geographic applicability of SSO)	**Basin Plan Site-Specific Objective**	**304(a) criteria (human health – water & organisms)**	**304(a) criteria (human health – organisms only)**	**304(a) criteria (aquatic life – acute)**	**304(a) criteria (aquatic life – chronic)**	**CTR (human health – water & organism)**	**CTR (human health – organism)**	**CTR (aquatic life – acute)**	**CTR (aquatic life – chronic)**
Gators Creek and its Tributaries Upstream of Vasona Dam, Lake Elsman, Lexington Reservoir, and Vasona Lake)	level 3 fish 5-15 cm in length) 0.1 mg/kg methylmercury wet weight fish tissue (measured in whole trophic level 3 fish 15-35 cm in length)								
Un-Ionized Ammonia	Annual Median: 0.025 mg/L (as nitrogen) Central Bay and Upstream Maximum: 0.16 mg/L (as nitrogen) Lower Bay Maximum: 0.4 mg/L (as nitrogen)			Freshwater criteria are pH, temperature and life-stage dependent. Saltwater criteria are pH and temperature dependent.	Freshwater criteria are pH, temperature and life-stage dependent. Saltwater criteria are pH and temperature dependent.				
Total Polycyclic Aromatic Hydrocarbons (PAHs)	15 µg/L (24-hr average)								

Pollutant (geographic applicability of SSO)	**Basin Plan Site-Specific Objective**	**304(a) criteria (human health – water & organisms)**	**304(a) criteria (human health – organisms only)**	**304(a) criteria (aquatic life – acute)**	**304(a) criteria (aquatic life – chronic)**	**CTR (human health – water & organism)**	**CTR (human health – organism)**	**CTR (aquatic life – acute)**	**CTR (aquatic life – chronic)**
Selenium (TMDL targets for North San Francisco Bay)	Fish Tissue Whole-Body: 8.0 mg/kg dw; Fish Muscle Tissue: 11.3 mg/kg dw Water Column: 0.5 µg/L (dissolved total selenium)	170 µg/L (updated 2002)	4200 µg/L (updated 2002)	Saltwater: 290 µg/L (updated 1999)	Freshwater: Fish Egg-Ovary: 15.1 mg/kg dw: Fish Whole-body: 8.5 mg/kg dw; Fish Muscle: 11.3 mg/kg dw; Water Lentic: 1.5 µg/L (30 day); Water Lotic: 3.1 µg/L (30 day) (updated 2016) Saltwater: 71 µg/L (updated 1999)	No Criterion	No Criterion	Saltwater: 290 ug/L	Freshwater: Bird Egg: 11.2 mg/kg dw; Fish Egg-Ovary: 15.1 mg/kg dw; Fish Whole-body: 8.5 mg/kg dw; Fish Muscle (skinless, boneless filet): 11.3 mg/kg dw; Water Lentic: 1.5 µg/L (30-day average); Water Lotic: 3.1 µg/L (30-day average) (amended CTR 2024) Saltwater: 71 ug/L

STAFF REPORT

APPENDIX C: REVIEW OF CWA SECTION 101(a)(2) "FISHABLE/SWIMMABLE" USES

Review of CWA Section 101(a)(2) "Fishable/Swimmable" Uses

This document contains a review of Clean Water Act (CWA) section 101(a)(2) uses, more commonly known as "fishable/swimmable" uses in the San Francisco Bay Region's Water Quality Control Plan (Basin Plan). Section 101(a)(2) provides, "[I]t is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983." (33 U.S.C. § 1251(a)(2).) The CWA regulations at 40 CFR § 131.20(a) provides, "The State shall from time to time, but at least once every 3 years, hold public hearings for the purpose of reviewing applicable water quality standards adopted pursuant to §§ 131.9 through 131.15 and Federally promulgated water quality standards and, as appropriate, modifying and adopting standards…The State shall also re-examine any waterbody segment with water quality standards that do not include the uses specified in section 101(a)(2) of the Act every 3 years to determine if any new information has become available. If such new information indicates that the uses specified in section 101(a)(2) of the Act are attainable, the State shall revise its standards accordingly."

The Regional Water Board has re-examined water body segments lacking fishable/swimmable uses to determine if any new information has become available that indicates the uses are attainable. There is new information related to water contact recreation for Hayward Marsh, but the prior de-designation of the use is still valid. The Water Board has also determined that new information has become available to designate Commercial and Sport Fishing (COMM) uses for many waters in the region.

We begin with a review of new information pertaining to the contact recreation use in Hayward Marsh. This new information provides an impetus to confirm the applicability of the 2011 Use Attainability Analysis (UAA) that resulted in the de-designation of the contact recreation use. We then discuss the new information pertaining to the COMM beneficial use in the Basin Plan. To provide context on the COMM issue, we include a historical account of the COMM use in the San Francisco Bay region. We explain how the new information reviewed related to the COMM use informs the COMM use designation project identified during the 2024 Triennial Review.

Review of Hayward Marsh Water Quality Standards (Water Contact Recreation Use)

In 2011, the Water Board approved resolution R2-2011-0057 amending the Basin Plan to remove the water contact recreation beneficial use (REC-1) from the Hayward Marsh. This action was the culmination of a Use Attainability Analysis (UAA) conducted by Water Board staff. Clean Water Act regulations (40 CFR §131.10(j)) provides a UAA is needed to demonstrate that any "presumptive use" cannot be attained in a water body. "Presumptive uses" are associated with what is more commonly known as the "fishable, swimmable waters goal" of the CWA § 101(a)(2) and REC-1 is one such presumptive

use. UAAs are structured assessments of the factors affecting the attainment of one or more beneficial uses for a water body.

The physical, chemical, biological, and economic factors that may be considered when conducting a UAA are listed at 40 CFR § 131.10(g)(1)-(6)[1], and any one of these factors may provide the basis for removing a beneficial use. Two of these factors were found to be applicable to Hayward Marsh:

- 40 CFR 131.10(g)(1): Naturally occurring pollutant concentrations prevent the attainment of the REC-1 use. The large numbers of waterfowl and other wildlife at Hayward Marsh contribute substantially to bacteria counts in the Marsh.
- 40 CFR 131.10(g)(3): Human-caused conditions or sources of pollution prevent the attainment of the REC-1 use, and these conditions cannot be remedied or would cause more environmental damage to correct than to leave in place. This criterion applies because Hayward Marsh was created and is sustained using reclaimed wastewater to create wildlife habitat. The Marsh was never intended to be used for REC-1 activities.

In 2022, the Water Board (through resolution R2-2022-0030) rescinded the National Pollutant Discharge Elimination System (NPDES) permit authorizing the discharge of treated wastewater into Hayward Marsh, which is a new development since 2011. Therefore, only the first of the two original factors providing the basis for removing the REC-1 beneficial use now applies. However, this factor still constitutes a compelling justification for not designating REC-1 for Hayward Marsh, especially in view of restoration efforts underway aimed at preserving and enhancing wildlife habitat.

The Restore Hayward Marsh project, which is in the design and permitting phase,[2] will implement the Hayward Area Shoreline Planning Agency's Shoreline Adaptation Master

[1] The six factors are: 1) Naturally occurring pollutant concentrations prevent the attainment of the use; or 2) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or 3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or 4) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or 5) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or 6) Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.

[2] https://www.ebparks.org/projects/restore-hayward-marsh-project#overview

Plan[3] by protecting and restoring Hayward Marsh's existing biodiversity, preserve and enhance public access features, design the marsh to be resilient to climate change, and improve nesting bird islands. Project improvements will include widening of the Bay-side levee which currently supports the San Francisco Bay Trail to protect the trail from erosion and flooding and enhance the trail's longevity. The Marsh's existing central levee will be raised to protect tidal marsh habitat, salt pannes, and new nesting bird islands from sea level rise; and new upland habitat will be created behind this raised levee to allow the marsh to migrate as sea level increases. The increased bird habitat provided through the restoration efforts will likely increase bird populations in Hayward Marsh and, consequently, also increase the naturally occurring bacteria counts from bird feces. These circumstances reinforce that the REC-1 use remains unattainable in the marsh due to the UAA factor in 40 CFR § 131.10(g)(1).

History of the COMM use in the San Francisco Bay Region's Basin Plan

Editions of the San Francisco Bay Region's Basin Plan up through and including the 1991 edition did not include a COMM beneficial use but rather contained the following beneficial use definitions for Water Contact Recreation and Ocean Commercial and Sport Fishing.

Water Contact Recreation – Includes all recreational uses involving actual body contact with water, such as swimming, wading, waterskiing, skindiving, surfing, **sport fishing**, uses in therapeutic spas, and other uses where ingestion of water Is reasonably possible.

Ocean Commercial and Sport Fishing – The commercial collection of various types of fish and shellfish, including those taken for bait purposes, and **sport fishing in oceans**, **bays, estuaries and similar non-fresh water areas**. The maintenance of ocean fishing relies mostly on the protection of aquatic life habitats where fish reproduce and seek their food. Protection of habitats is discussed in the succeeding sections.

With these definitions, it appears that the Water Board sought to protect recreational fishing in fresh water bodies through the Water Contact Recreation and in other waters through the Ocean Commercial and Sport Fishing use.

A June 17, 1993, memo from State Board Executive Director Walt Pettit clarified these and other beneficial use definitions to be used in all Basin Plans throughout California. The definition changes for contact recreation and fishing-related uses were as follows.

Water Contact Recreation (REC-1) – Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses

[3] https://www.hayward-ca.gov/shoreline-master-plan#:~:text=The%20Hayward%20Area%20Shoreline%20Planning,rise%20along%20the%20Hayward%20Shoreline

include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.

Commercial and Sport Fishing (COMM) – Uses of water for commercial or recreational collection of fish, shellfish, or other organisms including, but not limited to, uses involving organisms intended for human consumption or bait purposes.

With these revised definitions, the State Board clarified that the REC-1 use would protect the activity of fishing only insofar as it may involve incidental ingestion of water. The newly established COMM use would protect *fish consumption* associated with recreational and commercial fishing, with no distinction between fresh and ocean water fishing. These revised use definitions were incorporated into the San Francisco Bay Region's Basin Plan in 1995. Because the COMM use did not exist prior to 1993, there were no waterbodies in the San Francisco Bay region already designated with the COMM beneficial use at the time of the 1995 Basin Plan amendment. Accordingly, the COMM designations appearing in the 1995 Basin Plan were almost exclusively marine and estuarine waters for which the previous Ocean Commercial and Sport Fishing use was designated.[4]

COMM Designations in 2010 Basin Plan Amendment

A Basin Plan amendment adopted by the Water Board in 2010 added approximately 280 water bodies to the Basin Plan and designated beneficial uses for over 380 water bodies. These beneficial use designations included 79 COMM designations for the water bodies shown in the table below. The designations were based on information (that fishing was occurring) obtained from the California Department of Fish and Game (now called California Department of Fish and Wildlife), from websites devoted to fishing results, from the U.S. National Park Service, from Regional Parks Districts, and from historical COMM designations for all portions of San Francisco Bay.

Waterbodies for which COMM was Designated in 2010 Basin Plan Amendment

Bass Lake	Lake Hennessey	Mission Creek
Rodeo Lagoon	Sacramento-San Joaquin Delta	Islais Creek, tidal
Tomales Bay	Grizzly Bay	India Basin
Walker Creek	Honker Bay	South Basin
Soulajule Reservoir	Goodyear Slough	Yosemite Creek
Nicasio Reservoir	Cordelia Slough	Merritt Channel
Kent Lake	Suisun Slough	Lake Merritt

[4] The marine waters designated for COMM in the 1995 Basin Plan were: Pacific Ocean (Marin County), Drake's Estero, Limantour Estero, Bolinas Lagoon, Central San Francisco Bay, Richardson Bay, Lower San Francisco Bay, South San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay. Only two fresh water bodies (Sandy Wool Lake, Pacheco Pond) were designated for the COMM use in 1995.

Alpine Lake	Sheldrake Slough	San Leandro Bay
Lake Lagunitas	Boynton Slough	Lake Chabot (Alameda County)
Lake Merced	Peytonia Slough	Don Castro Reservoir
Golden Gate Channel	Hill Slough	Cull Canyon Reservoir
Corte Madera Creek	Cutoff Slough	Alameda Creek Quarry Ponds
Phoenix Lake	Volanti Slough	Alameda Creek
Lake Temescal	Montezuma Slough	Shadow Cliffs Reservoir
Richmond Inner Harbor	Nurse Slough	Del Valle Reservoir
Lexington Reservoir	Denverton Slough	Stevens Creek Reservoir
Coyote Creek, nontidal	Peyton Slough	Campbell Percolation Pond
Halls Valley Lake (Grant Lake)	Lafayette Reservoir	Vasona Reservoir
Cottonwood Lake	Mallard Slough (Contra Costa County)	Napa River, tidal
Andersen Reservoir	New York Slough	Mud Slough (Napa County)
Coyote Reservoir	Novato Creek	Devils Slough
Mare Island Strait	Stafford Lake	Napa River, nontidal
White Slough	Second Napa Slough	Rainbow Slough
South Slough	Third Napa Slough	Sonoma Creek
Dutchman Slough	Steamboat Slough	Napa Slough
San Pablo Reservoir	Hudeman Slough	China Slough
Lake Anza		

Consideration of New Information for CWA Section 101(a)(2) "Fishable/Swimmable" Uses

As stated above, CWA section 101(a)(2) establishes as an interim national goal that, "wherever attainable…water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved…" Further, section 101(a)(2) states that the objective of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." To meet these CWA objectives, states provide water quality for the protection and propagation of fish and wildlife, and for recreation in and on the water where attainable. CWA section 101(a)(2) creates a "rebuttable presumption" that fishable and swimmable uses are attainable. This means that most surface waters are designated with recreational and aquatic life beneficial uses. U.S. EPA has also explained that uses

related to the consumption of fish (COMM and shellfish harvesting (SHELL) in the Basin Plan) are also considered 101(a)(2) uses (see 80 Fed. Reg. 51020 (2015)).

Consistent with the CWA section 101(a)(2), the wildlife habitat and water-contact recreation beneficial uses are designated in all surface water bodies. The warm water (WARM) use is designated for all inland surface water bodies. In cases where an entire water body supports cold freshwater habitat (COLD) and not warm freshwater habitat, only COLD is designated, and not WARM. Because of the 1993 beneficial use definition changes described previously, the COMM use is not currently designated for all surface water bodies.

40 CFR § 131.20 provides that states "re-examine any waterbody segment with water quality standards that do not include the uses specified in section 101(a)(2) of the Act every 3 years to determine if any new information has become available. If such new information indicates that the uses specified in section 101(a)(2) of the Act are attainable, the State shall revise its standards accordingly."

The Water Board has obtained new information related to attainability of the COMM use in 42 San Francisco Bay region lakes and reservoirs for which the COMM use is not currently designated. This information consists of various forms of evidence that fishing is occurring in these waterbodies. One source of such information is fish tissue data obtained in the reservoir assessed while preparing California's 303(d) list.[5] The availability of such tissue data constitutes new information indicating that fishing is attainable in these water bodies because the data demonstrate that fish of consumable size are present in those waters. Other new information are from websites of reservoir operators, California's Department of Fish and Wildlife, and California's Office of Environmental Health Hazard Assessment, as well as a variety of other public websites where citizens can post information and photos about fish caught in specific waters (e.g., fishbrain.com). The table below lists these 42 lakes and reservoirs, along with a citation or summary of the new information reviewed during this triennial review.

Consistent with the new information relating to CWA section 101(a)(2) uses just described, the Water Board has identified a candidate project to revise its water quality standards by designating the COMM beneficial use in these 42 water bodies. As part of the project, Water Board staff will continue to search for new information of fishing in additional water bodies for which the COMM use is not already designated, and, if such information indicates attainability, COMM will be designated for those water bodies as well. There are fishing or public access restrictions in place for several of these lakes and reservoirs, such as for those reservoirs used primarily for drinking water. The COMM use is presumed to exist and be attainable in these access-restricted lakes and reservoirs. However, when the Water Board designates COMM for these water bodies, the use may be designated as E* to indicate the existence of the use in a water body

[5] https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2024-integrated-report.html

with access restrictions. The Basin Plan already has many access-restricted water bodies designated in this same fashion for water contact recreation. Waterbodies with E* designations are afforded the same level of protection as those water bodies that allow public access; the same water quality objectives are applied.

There is no other new information beyond the above on the attainability of CWA § 101(a)(2) uses and no additional new information about the attainability of 101(a)(2) uses was submitted to the Water Board during our initial solicitation to the public for information about the Basin Plan Triennial Review during April and May of 2024. That solicitation specifically invited comments on all Basin Plan water quality standards, which includes beneficial uses and water quality objectives in the Basin Plan. As required, the Water Board will continue to re-examine waters to determine if new information has become available concerning attainability of CWA section 101(a)(2) uses in future triennial reviews.

Waters in San Francisco Bay Region Missing COMM Designation with New Information

Water Body	Notes Relevant to COMM Designation	Access Restrictions
Lake Herman	Fish tissue data assessed via 303(d) list preparation. City of Benecia website states that no swimming or boating allowed, but fishing is allowed in Lake Herman.	
Lake Chabot (Solano County)	Fish tissue data assessed via 303(d) list preparation. Evidence for COMM via Fish Advisory released on 12/5/24 by OEHHA. (https://oehha.ca.gov/advisories/lake-chabot-solano-county).	
Briones Reservoir	Fish tissue data assessed via 303(d) list preparation.	EBMUD prohibits any human contact in Briones Reservoir. Accordingly, COMM is likely to be designated as E*.
Upper San Leandro Reservoir	Fish tissue data assessed via 303(d) list preparation.	"To preserve this native CA resource, fishing is not permitted in Upper San Leandro Reservoir or its tributaries." (https://www.ebparks.org/sites/default/files/trout_distrib_rr.pdf).
Lake Henne	Fish tissue data assessed via 303(d) list preparation. This water body is not currently in Basin Plan, so it will likely be designated for COMM, REC1, WILD, and WARM. Fishing reports available at https://fishbrain.com/fishing-waters/SRa7-paM/lake-henne.	
Bon Tempe Reservoir	Fish tissue data assessed via 303(d) list preparation. Fish and Wildlife last stocked Bon Tempe Lake on 12/8/24. "Accessible fishing dock and ramp. No boats and no swimming."	

Water Body	Notes Relevant to COMM Designation	Access Restrictions
Calaveras Reservoir	Fish tissue data assessed via 303(d) list preparation.	"Located five miles east of Milpitas, the San Francisco Water Department operates it as a domestic water supply and it is closed to the public." (https://wildlife.ca.gov/Fishing-in-the-City/SF/Gofish/Southeast).
Lower Crystal Springs Reservoir	Fish tissue data assessed via 303(d) list preparation.	"Fishing and hunting are not permitted per California State Fish and Game Regulation." (https://www.smcgov.org/parks/crystal-springs-trail-regulations).
Pilarcitos Reservoir	Fish tissue data assessed via 303(d) list preparation.	No public access at this reservoir so COMM likely designated as E*.
Ogier Quarry Ponds	Fish tissue data assessed via 303(d) list preparation. This water body is not currently in Basin Plan so it will likely be designated for COMM, REC1, WILD, and WARM. Fishing reports available at fish Brain link: https://fishbrain.com/fishing-waters/TmAoNuA1/ogier-ponds-no-4.	
Almaden Reservoir	Fish tissue data assessed via 303(d) list preparation. Evidence for COMM via OEHHA Fish Advisory: https://oehha.ca.gov/fish/advisories/almaden-reservoir /Santa Clara County Where to Fish: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=144907&inline.	
Calero Reservoir	Fish tissue data assessed via 303(d) list preparation. Evidence for COMM via OEHHA Fish Advisory: https://oehha.ca.gov/fish/advisories/calero-reservoir /Santa	

Water Body	Notes Relevant to COMM Designation	Access Restrictions
	Clara County Where to Fish: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=144907&inline.	
Guadalupe Reservoir	Fish tissue data assessed via 303(d) list preparation. Evidence for COMM via OEHHA Fish Advisory: https://oehha.ca.gov/advisories/guadalupe-reservoir /Santa Clara County Where to Fish: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=144907&inline.	
Lake Almaden	Fish tissue data assessed via 303(d) list preparation. Evidence for COMM via OEHHA Fish Advisory: https://oehha.ca.gov/advisories/almaden-lake /Santa Clara County Where to Fish: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=144907&inline.	
Lake Elizabeth	Fish tissue data assessed via 303(d) list preparation. "Located in Fremont's Central Park, this reservoir has a warmwater fishery for largemouth bass and sunfish. It receives periodic stocking of trout and catfish through the Fishing in the City Program and the City of Fremont. No fishing or parking fees are charged." (https://wildlife.ca.gov/Fishing-in-the-City/SF/Gofish/Southeast).	
Lake Madigan	Fish tissue data assessed via 303(d) list preparation.	
Wildcat Lake	"Fishing is allowed in Tomales Bay, from most park beaches, and in freshwater lakes and ponds." https://www.nps.gov/thingstodo/fishing-at-point-eyes.htm.	

Water Body	Notes Relevant to COMM Designation	Access Restrictions
	"A valid California fishing license is required to fish in the park, and fees vary." https://www.nps.gov/pore/planyourvisit/fishing.htm#specificregulations.	
Crystal Lake	"A valid California fishing license is required to fish in the park, and fees vary." https://www.nps.gov/pore/planyourvisit/fishing.htm#specificregulations.	
Pelican Lake	"A valid California fishing license is required to fish in the park, and fees vary." https://www.nps.gov/pore/planyourvisit/fishing.htm#specificregulations.	
Laguna Lake		"Public banned" https://www.sfgate.com/sports/article/lakes-restrictions-county-by-county-plus-two-3310892.php.
Pomponio Reservoir	https://fishboxapp.com/spot/united-states/california/pomponio-reservoir-1344083.	
Golden Gate Park Lakes		Fishing is prohibited. "The provisions of this Section are intended to prohibit fishing in any park other than fishing in Lake Merced pursuant to a license obtained pursuant to Article 8 of this Code or in any other area designated by Commission resolution as a fishing area." (https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_park/0-0-0-292).

Water Body	Notes Relevant to COMM Designation	Access Restrictions
Mountain Lake		"No, fishing isn't permitted at Mountain Lake. This is a restored habitat that wildlife ecologists are working hard to clean up and revive. A good spot for fishing in the Presidio is Torpedo Wharf near Crissy Field." (https://presidio.gov/explore/attractions/mountain-lake).
Upper Crystal Springs Reservoir		"Fishing and hunting are not permitted per California State Fish and Game Regulation." (https://www.smcgov.org/parks/crystal-springs-trail-regulations).
San Andreas Reservoir		"Fishing and hunting are not permitted per California State Fish and Game Regulation." (https://www.smcgov.org/parks/crystal-springs-trail-regulations).
San Antonio Reservoir		"This reservoir, located two and one-half miles east of Sunol, is operated as a domestic water supply by the San Francisco Water Department and is closed to the public." (https://wildlife.ca.gov/Fishing-in-the-City/SF/Gofish/Southeast).
Lake Lagunita (San Mateo)	https://punchmagazine.com/lake-lagunita/. https://125.stanford.edu/then-and-now/990/. https://stanforddaily.com/2023/01/09/so-much-more-alive-stanford-students-rejoice-over-full-lake-lag/.	Fish presence unlikely so COMM likely designated as E*. "Note: Any historic records of fish in Lagunita are incidental and were due to water diversion methods that are no longer in use. No persistent population of fish exist in Lagunita." https://conservation.stanford.edu/education-

Water Body	Notes Relevant to COMM Designation	Access Restrictions
		outreach/lagunita-interpretation/species-and-ecology-lagunita#species-lists.
Felt Lake		"Private water, no public access." (https://fishbrain.com/fishing-waters/8x_CtA05/felt-lake).
Searsville Lake		"Private water, no public access." (https://fishbrain.com/fishing-waters/1i8DUPM3/searsville-lake).
Los Capitancillos Percolation Ponds	Fishing reports available at fish Brain link: https://fishbrain.com/fishing-waters/ciREesOR/los-capitancillos-ponds.	
Guadalupe Percolation Ponds	Evidence for COMM via OEHHA Fish Advisory: https://oehha.ca.gov/fish/advisories/guadalupe-reservoir.	
Cherry Flat Reservoir	Fishing reports available at fish Brain link: https://fishbrain.com/fishing-waters/JG2RCMzA/cherry-flat-reservoir.	**Uncertainty related to legal public access based on comments on photos.
Lake Dalwigk	Fishing reports available at fish Brain link: https://fishbrain.com/fishing-waters/MXJGiNT4/lake-dalwigk.	
Milliken Reservoir	Fishing reports available at fish Brain link: https://fishbrain.com/fishing-waters/E9o14D2D/milliken-reservoir.	**Uncertainty related to legal public access based on comments on photos. "Public banned" https://www.sfgate.com/sports/article/lakes-restrictions-county-by-county-plus-two-3310892.php.
Jewel Lake	In 2014, CDFW rescued 191 Sacramento Perch from Jewel Lake due to the accumulation of silt which resulted in	

Water Body	Notes Relevant to COMM Designation	Access Restrictions
	diminished habitat quality for the fish. Fish were transported to another pond, Gray Lodge. CDFW stated that "without some intervention to minimize sediment accumulation Jewel Lake will like progress into a meadow." (https://wildlife.ca.gov/Drought/Projects/Jewel-Lake).	
Rector Reservoir	Fishing reports available at fish Brain link: https://fishbrain.com/fishing-waters/w1cw24El/rector-reservoir.	"Public banned" https://www.sfgate.com/sports/article/lakes-restrictions-county-by-county-plus-two-3310892.php.
Angwin Lakes	Deer Lake: https://fishboxapp.com/spot/united-states/california/deer-lake-1337239. Doe Lake: https://fishboxapp.com/spot/united-states/california/doe-lake-1337432. Granite Lake: https://fishboxapp.com/spot/united-states/california/granite-lake-1339032. Lake Newton: https://fishboxapp.com/spot/united-states/california/lake-newton-1340708. Lake Orville: https://fishboxapp.com/spot/united-states/california/lake-orville-1340713. Lake Whitehead: https://fishboxapp.com/spot/united-states/california/lake-whitehead-1340748.	

Water Body	Notes Relevant to COMM Designation	Access Restrictions
	Red Lake: https://fishboxapp.com/spot/united-states/california/red-lake-1344457.	
Bell Canyon Reservoir	Fishing reports available at fish Brain link: https://fishbrain.com/fishing-waters/K7sF1I8L/bell-canyon-reservoir.	**Uncertainty related to legal public access based on comments on photos.
Kimball Reservoir		"The City of Calistoga owns and operates a water reservoir and a conventional surface water treatment facility four miles northwest of the city. This water resource produces approximately one half of the total annual water demand for the community." (https://www.ci.calistoga.ca.us/city-hall/departments-services/public-works/water-wastewater-treatment/kimball-dam-water-reservoir). Likely access restrictions. Pending access confirmation.
Lake Frey	Fishing reports available at fish Brain link: https://fishbrain.com/fishing-waters/joe_-PZP/lake-frey.	
Suisun Reservoir	Fishing reports available at fish Brain link: https://fishbrain.com/fishing-waters/FIdyiU2U/suisun-reservoir.	
Lake Curry		"Public banned" https://www.sfgate.com/sports/article/lakes-restrictions-county-by-county-plus-two-3310892.php.

STAFF REPORT

APPENDIX D: 2024 TRIENNIAL REVIEW ANNOUNCEMENT AND INFORMATION ABOUT ONLINE SURVEY FORM

2024 Triennial Review - Candidate Projects

California Water Boards sent this bulletin at 04/10/2024 02:35 PM PDT

Having trouble viewing this? View it as a webpage

2024 Triennial Review of the Basin Plan

The San Francisco Bay Regional Water Quality Control Board (Water Board) is conducting the 2024 Triennial Review of the water quality standards in the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Water Board's Triennial Review will identify issues that are considered a priority to address through Basin Plan amendment projects.

Based on comments from interested parties, coordination with the statewide Basin Plan roundtable, and a review of regulatory program needs, Water Board staff have identified a list of candidate projects for consideration.

You are invited to comment as part of our first (informal) comment period. The goal of this first comment period is to identify new projects and to receive feedback on support or opposition for the current candidate projects. Please fill out our online form with your project proposals and feedback; a copy of the questions can be found on our website.

If you have questions, reach out to Sami Harper (samantha.harper@waterboards.ca.gov).

Fill out the comment form

SF Bay Water Board Triennial Review - 2024

This Form solicits input regarding the 2024 Triennial Review of the Water Quality Control Plan for the San Francisco Bay Region ("Basin Plan"). Please be aware that the open response questions have a 4000-character limit (including spaces) and make your responses as clear and complete as possible. Regional Water Board staff recommend that submitters first draft their responses in a word processor or similar software, and then copy and paste the text into the Form.

If you need assistance filling out this Form, please contact:
Samantha Harper
(510) 622-2415
samantha.harper@waterboards.ca.gov

Please include the words TRIENNIAL REVIEW (all capitalized) in the subject line of your email. Please note that the same character limits apply to paper and electronic versions. Reference or supporting documents, data, information, or evidence are addressed in the last section of this Form.

This form replaces our past practice of doing a workshop in the spring of the Triennial Review year. This form will not require a formal response to comments. However, your input may be used to alter candidate project descriptions, add new projects to the final list for consideration, and assign a value for the "public support" for each candidate project.

If you need language assistance with this webpage, please contact the Office of Public Participation at (916) 341-5254 or at OPP-LanguageServices@waterboards.ca.gov.

This form will remain open until May 24, 2024, at 5 PM.

To obtain a copy of the questions used in the survey form visit our website.