

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION**

RESOLUTION No. R2-2021-XXXX

**Approving the 2021 Triennial Review of the San Francisco Bay Basin Water Quality Control Plan and Adopting a List of Prioritized Basin Planning Projects**

**WHEREAS, the California Regional Water Quality Control Board, San Francisco Bay Region (Water Board), finds that:**

1. The San Francisco Bay Basin Water Quality Control Plan (Basin Plan) is the Water Board's master water quality control planning document. The Basin Plan has been duly adopted by the Water Board and approved by the State Water Resources Control Board (State Water Board), the Office of Administrative Law, and U.S. EPA, where required.
2. The Basin Plan contains the San Francisco Bay Region's water quality standards, which consist of beneficial uses, water quality objectives, and antidegradation policies, and implementation plans necessary to protect those uses.
3. In accordance with section 303(c)(1) of the federal Clean Water Act and section 13240 of the California Water Code (Water Code), the Water Board has conducted its 2021 Basin Plan Triennial Review.
4. The Water Board prepared an issue paper entitled "Brief Issue Descriptions," dated April 2021, describing potential Basin Plan projects.
5. The Water Board circulated the candidate Basin Plan project descriptions and held a staff workshop on June 21, 2021, for the purpose of receiving public comments concerning the need for revisions to the water quality standards (i.e., beneficial use designations, water quality objectives, and antidegradation policies) established in the Basin Plan.
6. Taking into account initial public comments, Water Board developed a staff report, dated September 13, 2021 (Staff Report), describing the 2021 Triennial Review process and the 2021 Triennial Review List of Prioritized Basin Planning Projects (Prioritized List) to be pursued over the next three years. The Staff Report describes water quality issues, the relative priority for investigating the issues, identifies which issues can be investigated with existing resources, and identifies additional issues along with the additional resources it will take to investigate and complete them.
7. On September 13, 2021, the Water Board provided to all interested parties the Prioritized List and Staff Report. The Water Board provided notice of a public hearing to consider adoption of the Prioritized List and of a written comment

period on the Prioritized List, Staff Report, and issues the Water Board should address in future Basin Plan amendments.

8. The Water Board received five comment letters. The Water Board carefully considered those comment letters and responded to comments. Based on the comments, the Water Board made minor revisions to the Staff Report and Prioritized List.
9. The Water Board held a public hearing on November 10, 2021, to solicit and receive comments regarding the review and revision of water quality standards in the Basin Plan. The Water Board has carefully considered those comments.

**NOW THEREFORE BE IT RESOLVED, THAT**

1. The Water Board hereby certifies completion of the 2021 Triennial Review and adopts the *2021 Triennial Review List of Prioritized Basin Planning Projects* as set forth in Exhibit A to this Resolution; and
2. The Water Board may address issues described in the revised 2021 Triennial Review Staff Report, but not included in Exhibit A, as staff and external resources may become available; and
3. The entire Basin Plan shall remain in effect until such time that appropriate and specific amendments are adopted by the Water Board and approved by the appropriate review authorities.

I, Michael Montgomery, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on November 10, 2021.

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Michael Montgomery  
Executive Officer

Exhibit A – 2021 Triennial Review List of Prioritized Basin Planning Projects

## **Exhibit A**

### **2021 Triennial Review List of Prioritized Basin Planning Projects**

#### **1. Climate Change and Wetland Policy Update**

Water Board staff have invested nearly six years on efforts related to this project and have identified a need for multiple project phases.

The first phase was an analysis of how existing policies regulating wetland fill, wetlands conservation, and ecosystem restoration can best incorporate consideration of sea level rise. This work was published in a Project Report in April 2019.

The second phase is a Basin Plan amendment expected in the spring of 2022 that includes two components: (1) a narrative description added to Chapter 1 to explain how climate change could lead to physical and biological impacts in our region and (2) updating language in Chapter 4 to clarify our planning and permitting processes for climate adaptation projects in coastal waters, including projects that result in fill in wetlands.

The scope of the problem makes this project technically complex and challenging, but there is a growing body of information that can inform our policies at the regional level. Future phases or components of this project could explore changes to 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 compensatory mitigation and monitoring requirements for 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 coordinating with the South Bay Salt Pond Restoration Project to facilitate beneficial use of soil for tidal marsh restoration. 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 compensatory mitigation and monitoring requirements for grey infrastructure (e.g., human-engineered water resources infrastructure such as treatment facilities, dams, seawalls, and pipes) where sea level rise and other climate change impacts affect the mitigation. In places where green infrastructure is not feasible, grey infrastructure may be necessary to protect transportation, energy-generation and wastewater treatment facilities, and other buildings from sea level rise. Clarifying the Water Boards' approach for permitting grey infrastructure 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 first Basin Plan amendment described

above. For instance, there may be a need to clarify mitigation and monitoring requirements for conversion of one wetland type to another wetland type.

Water Board staff have launched a Climate Action Team to assess science-based and stakeholder-driven climate actions needed to address impacts to beneficial uses from other climate change effects, such as groundwater rise, flooding, fire and drought. The Team will recommend actions and strategies that may include amending the Basin Plan to clarify or add authorities and implementation needed to protect beneficial uses.

## RANKING DETAILS

**CATEGORY:** Update Plans and Policies and Update Implementation Plan

**PROPOSED BY:** Water Board

**SUPPORTED BY:** Water Board, ACWD, City of Palo Alto, BACWA

**SCORE:** 72

**COMPLEXITY:** High

**IMPLEMENTING DIVISION:** Planning, Watershed

**ESTIMATED PERSONNEL-YEARS (PY):** 2.0

**PY RUNNING TOTAL:** 2.0

## 2. Nutrient Management Strategy and Dissolved Oxygen Assessment Framework in San Francisco Bay

This candidate project would involve staff participation in the Nutrient Management Strategy (NMS) for San Francisco Bay and possible preparation of documentation to memorialize key outcomes of the NMS. Water Board staff has been working with stakeholders and scientists including the San Francisco Estuary Institute (SFEI) to support regulatory management decisions through an improved understanding of the role nutrients play in water quality in the San Francisco Bay Estuary. The NMS Science Plan includes: a monitoring program to gather the observations necessary to support modeling of the Bay ecosystem's response to nutrients; a framework to assess the Bay's condition with respect to nutrients; and development of nutrient management strategies, particularly for NPDES municipal wastewater facilities. These strategies may include a variety of treatment facility upgrades as well as nature-based treatment solutions like horizontal levees which overlap with climate change adaptation and resilience goals. A substantial portion of resources allocated to this project support Water Board staff participation in a variety of NMS committees and workgroups overseeing work to acquire the scientific information needed to evaluate nutrient loading and potential impacts of eutrophication to San Francisco Bay. Additionally, the candidate project will involve collaborating with an NMS working group to develop a eutrophication assessment framework for sloughs in South San Francisco Bay. The working group will focus on establishing dissolved oxygen thresholds that protect aquatic life by adapting the Virginian Province Approach, which was successfully used by the Water Board in Suisun Marsh. These dissolved oxygen evaluation guidelines and assessment framework could subsequently be used for permitting decisions and the Integrated Report. 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 Water Quality Objectives

**PROPOSED BY:** Water Board

**SUPPORTED BY:** San Francisco Baykeeper, The Bay Institute, City of Palo Alto, ACWD, BACWA

**SCORE:** 64

**COMPLEXITY:** High

**IMPLEMENTING DIVISION:** NPDES, Watershed, Planning

**ESTIMATED PERSONNEL-YEARS (PY):** 1.0

**PY RUNNING TOTAL:** 3.0

### 3. Regional Stream Protection Policy

The candidate project is a Basin Plan amendment that would emphasize the importance of protecting riparian corridors and ephemeral streams in the region. The project would consist of two components. First, we would add information to Chapter 1 that presents current scientific understanding about how riparian corridors and ephemeral streams play an important role in maintaining healthy aquatic ecosystems, particularly in the face of a changing climate. Conservation of resilient riparian areas is an essential element of our climate change priorities. Riparian areas provide important dispersal habitat for species undergoing climate-induced range shifts because they span the climatic gradients 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. Climate change creates additional challenges for the protection of ephemeral creeks, as these ecosystems will be more susceptible to changes in precipitation and temperature, and the combined effect leading to increased evapotranspiration rates. The narrative material in Chapter 1 can also highlight the importance of connectivity between tidal portions of creeks and baylands for ensuring an adequate sediment supply to baylands. Baylands are the lands and shallow waters along San Francisco Bay that are or formerly were between the minimum and maximum boundaries of the Bay's tides including tidal marshes and mudflats. Creeks are a critical source of the sediment needed for wetland accretion to keep pace with sea level rise. Second, we would add language in Chapter 4 that includes clear definitions and delineation procedures for riparian corridors and ephemeral streams along with policy measures to promote resilience of these ecosystems to changes in precipitation and temperature. To accomplish this, we would review existing policies to evaluate the need for clarification or updates and assess the need for new policies to enhance ecological functions and values and promote sediment management practices that maintain beneficial uses. Initial efforts for this project will likely start where local creeks meet baylands and focus on policies that promote creek to bayland connectivity. Future project work will turn to identification of additional implementation

measures to ensure stream and riparian area protection up to the headwaters of watersheds.

This project is an important part of the Water Board's response to climate change by: (1) promoting connectivity between watersheds and baylands, (2) addressing projected impacts to beneficial uses from the effects of flooding and sea level rise at confluences of streams and/or flood control channels with the Bay or Pacific Ocean and (3) addressing projected impacts to beneficial uses from the effects of fire and drought. 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):** 0.5

**PY RUNNING TOTAL:** 3.5

## 4. Temperature Limits to Protect Salmonids

This candidate project would involve reviewing the latest scientific information applicable to Bay Area streams to set appropriate temperature thresholds and an acceptable range of water temperatures to protect salmonids at various life stages. The material reviewed would include available information on the multiple stressors to steelhead in Bay Area creeks and whether local steelhead populations are adapted to local conditions. The first step of this project is to collaborate with Valley Water and a technical panel of scientific experts, and agencies such as National Oceanic and Atmospheric Administration (NOAA), U. S. EPA, and California Department of Fish and Wildlife (CDFW). This group will identify available scientific information and data gaps within topics such as steelhead ecology, food web dynamics, food supply, respiration rates, and growth rates under thermal stress. These interactions will incorporate regional stakeholder input from local agencies and environmental organizations. A subsequent stage of the project would be to consider amending Chapter 3 (Water Quality Objectives) of the Basin Plan to incorporate the protective temperature thresholds along with explanatory guidance as to their applicability for Water Board permits. 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 Water Quality Objectives

**PROPOSED BY:** U.S. EPA

**SUPPORTED BY:** Water Board, The Bay Institute, ACWD

**SCORE:** 50

**COMPLEXITY:** High

**IMPLEMENTING DIVISION:** Planning

**ESTIMATED PERSONNEL-YEARS (PY):** 0.5

**PY RUNNING TOTAL:** 4.0

## **5. 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). Resolution No. 2017-0027 established these three uses in the Statewide Plan for Inland Surface Waters, Enclosed Bays and Estuaries of California, but it 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 phase of the candidate project would prioritize relationship-building and collaboration with tribes and subsistence fishing communities including individual meetings with 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. These 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. Water Board staff would work with local tribes as well as groups representing subsistence fishing communities 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 goal of this candidate project is to ultimately amend the Basin Plan to designate these three uses for waterbodies in the San Francisco Bay Region. After collaborating with tribes and subsistence fishing communities to collect the relevant data, Water Board staff would determine the appropriate geographic scope (e.g., specific waterbodies or regional designation) of the use designations for the Basin Plan amendment. The final designation of

waterbodies is likely to take more than 3 years which aligns with our other complex Basin Planning projects.

## RANKING DETAILS

**CATEGORY:** Update Beneficial Uses

**PROPOSED BY:** Clean Water Action, State Water Board

**SUPPORTED BY:** San Francisco Baykeeper, The Bay Institute, Clean Water Action, California Indian Environmental Alliance, and Bayview Hunters Point Community Advocates

**SCORE:** 49

**COMPLEXITY:** Medium

**IMPLEMENTING DIVISION:** Planning

**ESTIMATED PERSONNEL-YEARS (PY):** 1.0

**PY RUNNING TOTAL:** 5.0