

WEST FALSE RIVER DROUGHT SALINITY BARRIER PROJECT

Delta Plan Certification of Consistency

GP1 – Mitigation Measures, Best Available Science, and Adaptive Management

Summary

The West False River Drought Salinity Barrier Project (WFRDSB; proposed project) would block tidal flows (and velocities) in West False River, and tidal flows that otherwise would have flowed into or out from West False River would be redistributed to adjacent channels (e.g., Fisherman’s Cut, Dutch Slough, and the mouth of Old River), which would experience greater tidal flows. The California Department of Water Resources (DWR) has determined that the WFRDSB is a “Covered Action” under the Delta Plan. A State or local agency that proposes to undertake a covered action must submit a Certification of Consistency with the Delta Plan to the Delta Stewardship Council.

A Certification of Consistency has been submitted electronically for this proposed project, via the Delta Stewardship Council’s website online form. The purpose of this document is to set forth DWR’s findings regarding Delta Plan Policy GP1, which includes adequate coverage of mitigation measures, documentation of the use of best available science, and an adaptive management plan.

Mitigation Measures

The draft environmental impact report (DEIR) was prepared for the proposed project. It was released for public comment in July 2022. The 45-day public review period for the DEIR extended from Thursday, July 7, 2022, to Monday, August 22, 2022. The DEIR identifies the applicable environmental commitments and mitigation measures that would be incorporated by DWR.

DWR has determined that each of its mitigation measures is as effective or more effective than the relevant mitigation measure identified in the Delta Plan’s Mitigation and Monitoring Reporting Program (MMRP). A crosswalk between the environmental commitments, mitigation measures, and proposed project design for the WFRSDB and the Delta Plan MMRP is included in the attachment **MMRP Crosswalk**. Additional measures may be imposed over the course of obtaining environmental permits from regulatory agencies such as the California Department of Fish and Wildlife and the U.S. Army Corps of Engineers. DWR would be required to also implement those additional measures as part of the conditions of approval for implementing the proposed project.

Best Available Science

DWR relied upon best available science when compiling all elements of the Delta Plan certification of consistency for the proposed project, as described by the Delta Plan’s **Appendix 1A**. These include the following elements:

- Well-stated objectives and hypotheses.
- Conceptual models of habitat requirements and distribution of sensitive fish and wildlife species.
- Site-specific hydrodynamic modeling of various design alternatives and water quality modeling.
- The best professional judgment of experts.

In particular, within this Delta Plan certification of consistency, DWR most specifically articulates the use of best available science in the proposed project's adaptive management and monitoring plan (AMMP). DWR will be leveraging knowledge gained from studying the prior implementations of drought barriers installed at West False River under emergency authorizations. Adaptive management of the WFRDSB will be based on best available science, including evaluation of whether the monitoring results are consistent with the modeling predictions and whether the project's goals are being achieved, and whether current scientific understanding of Delta hydrology, fisheries resources, and water quality need to be refined.

For more information regarding the scientific understanding and conceptual models used for development of the proposed project, please refer to the attachment **Adaptive Management and Monitoring Plan**.

Adaptive Management

This document provides a brief summary of the AMMP that was developed for the WFRSDB. This AMMP has been developed to evaluate whether the drought salinity barrier is performing as intended and to understand how the structure affects abiotic and biotic conditions in the Central Delta and western Delta. This AMMP was developed to be consistent with what is presented in the environmental impact report and biological assessment and subsequently reflected in project permits (NMFS and USFWS biological opinions, CDFW incidental take permit).

The documentation of the adaptive management and monitoring approach for the WFRSDB was developed in consideration of the Delta Plan's nine-step adaptive management approach (Delta Plan Appendix 1B). As summarized below, the AMMP describes how DWR will implement each of the nine adaptive management steps:

1. **Define the Problem**—During drought conditions, water stored in upstream reservoirs may be insufficient to repel salinity moving upstream from San Francisco Bay. Without the protection of the drought salinity barrier, saltwater intrusions could render Delta water unusable for agricultural needs and reduce habitat value for aquatic species.
2. **Goals and Objectives**—The objective of the proposed project is to minimize the impacts of salinity intrusion on the beneficial uses of water during persistent drought conditions.
3. **Model Linkages**—This AMMP summarizes the current scientific understanding of the potential effects of the drought salinity barrier on water quality and biological resources.
4. **Select Actions, Development Performance Measures**—The project will result in construction of a rock barrier within the West False River to minimize the extent of salinity intrusion into the interior Delta.
5. **Design and Implement Actions**—The drought salinity barrier at the West False River has been implemented before, under emergency authorizations in 2015 and 2021, and has been shown to be effective at achieving its purpose. The project will be ready for implementation during subsequent drought years over the next decade.
6. **Monitoring**—This AMMP outlines the monitoring methods to evaluate areas of remaining uncertainty, including whether actual water quality meets modeling predictions and whether

the presence of the barrier will result in meaningful increases in the predation loss of native fishes by non-native piscivorous fish.

7. **Analyze, Synthesize, Evaluate**—Results from monitoring will be analyzed and used to assess the effectiveness of the drought salinity barrier and identify potential problems. DWR is funding a study to analyze the effects of fish predation loss at the salinity barrier. The study will consider a suite of different environmental and habitat variables (e.g., distance from barrier, tide, turbidity, temperature, conductivity, light levels) that were hypothesized to have a potential influence on seasonal trends in predation risk.
8. **Communicate**—DWR will prepare a final report on the project’s effects on water quality. In addition, DWR will prepare a monthly water quality summary. Forums such as the Association of California Water Agencies’ Conferences and the Bay-Delta Science Conference are potential opportunities to communicate lessons learned to a broad audience of scientists, managers and decision-makers.
9. **Adaptive Site Management**—Information from the monitoring will be used to inform future implementation of the drought salinity barrier. Adaptive site management will include considerations of whether some slight refinements to the barrier design can be implemented to minimize effects on fisheries resources (if there are even any measurable effects) or improve its effectiveness at minimizing salinity intrusion.