Long-Term Operation of the California State Water Project

Addendum to the Final Environmental Impact Report To Modify Condition of Approval 9.1.3 Delta Smelt Summer-Fall Habitat Action in 2024 under Incidental Take Permit No. 2081-2019-066-00

Prepared for:

California Department of Water Resources
3500 Industrial Blvd.,
West Sacramento, CA 95691
Contact: Christopher Wilkinson
916-873-4301

Prepared by:

ICF
980 9th Street, Suite 1200
Sacramento, CA 95814
Contact: Adrian Pitts
916-501-3199

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Acronyms and Abbreviations

Term	Definition
°C	degrees Celsius
2020 FEIR	2020 *Final Environmental Impact Report for Long-Term Operation of the California State Water Project*
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
cHAB	cyanobacteria harmful algal bloom
CVP	Central Valley Project
D-1641	Decision 1641
Delta	Sacramento–San Joaquin Delta
DWR	California Department of Water Resources
EDSM	Enhanced Delta Smelt Monitoring Program
EIR	Environmental Impact Report
ITP	incidental take permit
km	kilometer
NDOI	Net Delta Outflow Index
NOD	Notice of Determination
P. forbesi	*Pseudodiaptomus forbesi*
ppt	parts per thousand
psu	practical salinity unit
Reclamation	U.S. Bureau of Reclamation
Rkm	river kilometer
SMSCG	Suisun Marsh Salinity Control Gates
Summer-Fall Action	Delta Smelt Summer-Fall Habitat Action
SWP	State Water Project
TAF	thousand acre-feet
USFWS	U.S. Fish and Wildlife Service

Chapter 1
Introduction and Purpose

1.1 Introduction

The California Department of Water Resources (DWR, permittee) is submitting a Minor Amendment Request to the California Department of Fish and Wildlife (CDFW) for its incidental take permit (ITP) for Long-Term Operation of the California State Water Project (SWP) (California Department of Fish and Wildlife, 2020 ITP, Permit No. 2081-2019-066-00). The ITP issued in 2020 provides incidental take coverage for the effects of SWP operations on four fish species listed under the California Endangered Species Act (CESA), including Longfin Smelt (*Spirinchus thaleichthys*), Delta Smelt (*Hypomeus transpacificus*), winter-run Chinook Salmon (*Oncorhynchus tshawytscha*), and spring-run Chinook Salmon (*O. tshawytscha*) in: (1) the Sacramento River from its confluence with the Feather River downstream to the legal Sacramento–San Joaquin Delta (Delta) boundary at the I Street Bridge in the City of Sacramento; (2) the Delta (i.e., upstream to Vernalis and downstream to Chipps Island); and (3) Suisun Marsh and Bay (see Figure 1-1). Since issuance of the ITP in 2020, DWR has requested and CDFW has issued nine amendments to the ITP. On June 14, 2024, DWR requested the addition of White Sturgeon (*Acipenser transmontanus*), which the Fish and Game Commission voted to designate as a candidate species at its June 19, 2024 meeting, as a Covered Species subject to the take authorization provided by the ITP. On July 12, 2024, CDFW issued Major Amendment 9 to the ITP to include White Sturgeon as a covered species. This Environmental Impact Report (EIR) Addendum provides California Environmental Quality Act (CEQA) coverage for DWR's request for Minor Amendment 10 to the ITP, in which DWR requests to modify Condition 9.1.3, *Delta Smelt Summer-Fall Habitat Action* (*Summer-Fall Action*) and 9.1.3.1, *Summer-Fall Action Plan*, in 2024.

Condition 9.1.3 is intended to benefit Delta Smelt food supply and habitat, thereby contributing to the recruitment, growth, and survival of Delta Smelt. The FLaSH conceptual model (Brown et al. 2014) states that Delta Smelt habitat should include low-salinity conditions of 0 to 6 parts per thousand (ppt), turbidity of approximately 12 NTU, temperatures below 25 degrees Celsius (°C), food availability, and littoral or open water physical habitats. The highest-quality habitat in Suisun Marsh and Grizzly Bay includes areas with complex bathymetry, in deep channels close to shoals and shallows, and in proximity to extensive tidal or freshwater marshlands and other wetlands. The *Summer-Fall Action* is intended to provide the aforementioned habitat components in the Suisun Marsh and Grizzly Bay through a range of actions by water year type to improve water quality and food supplies.

Condition 9.1.3.1, *Summer-Fall Action Plan*, requires DWR to develop a plan to operate the SWP in a manner that would maximize the likelihood of providing the largest amount of high quality Delta Smelt habitat in the summer and fall by operating the Suisun Marsh Salinity Control Gates (SMSCG) during the June through October time period of Above Normal, Below Normal, and Dry water years and maintaining the position of the 2 ppt near bottom isohaline (X2) at less than or equal to 80 kilometers (km) from the Golden Gate Bridge during September and October of Wet and Above Normal water years. The *Summer-Fall Action Plan* is developed based on hydrologic, operational, and temperature forecasts using the best available modeling.

Maintaining X2 at less than or equal to 80 km during September and October of Wet and Above Normal water years is referred to as the Fall X2 Action. The purpose of the Fall X2 Action is to move the low salinity zone (0.5-6 practical salinity units [psu]) into Suisun Bay where Delta Smelt historically and primarily reared during the fall and winter months of wetter year types. The Fall X2 Action is achieved through a combination of SWP and Central Valley Project (CVP) reservoir releases and export reductions.

To address scientific uncertainty, the 2008 FWS Biological Opinion included an adaptive management framework and the development of a robust science and monitoring program to better understand how delta smelt would respond to the Fall X2 action. In 2012, the U.S. Fish and Wildlife Service (USFWS) initiated the development of several life cycle modeling efforts to better understand the factors that affect Delta Smelt population growth rates. These efforts led to several published life cycle models, including the recently published Polansky et al. (2024) life cycle model that USFWS used in the federal Endangered Species Act consultation on the Long-Term Operation of the CVP and SWP to analyze the effects of the Proposed Action on Delta Smelt population growth rate. Polansky et al. (2024) found that Delta Smelt survival is positively correlated with summer (June–August) Delta outflow and suggested that this may result from greater overlap of Delta Smelt distribution with foraging habitat opportunities, based on evidence from bioenergetics modeling by Smith and Nobriga (2023). There was relatively little statistical support for fall outflow being correlated with Delta Smelt survival in life cycle modeling (Polansky et al. 2021; Smith et al. 2021; Polansky et al. 2024), consistent with the suggestion that summer outflow management may be more effective than fall outflow management based on bioenergetics modeling (Smith and Nobriga 2023). The same thing happens if flows are high enough in the fall, but the response of Delta Smelt lessens because water temperatures cool into more appropriate ranges and the prey subsidy is reduced as prey populations seasonally senesce. This newer information means the species benefits originally anticipated for the Fall X2 action are unlikely to translate to improved Delta Smelt population growth rate. A modified Fall X2 action was incorporated into the Summer-Fall Action in the 2019 BiOp and 2020 LTO ITP adding to the SMSCG operation and other tools acknowledging the advancements in the Delta Smelt Life Cycle Model and expected benefits of summer habitat

DWR proposes to amend Conditions 9.1.3 and 9.1.3.1 by implementing an alternative to the *Summer-Fall Action* (Proposed Alternative Action) and seeking participation from the U.S. Bureau of Reclamation (Reclamation) and corresponding CVP operations to account for real-time information and results generated from recent life cycle model (Polansky et al. 2024) analyses. The Proposed Alternative Action includes:

- Implementing the September Fall X2 requirement (X2 less than or equal to 80 km) as described in the 2019 USFWS Biological Opinion and 2020 ITP.
- Operating the SMSCG daily from September 6 through September 30.
- Beginning October 1st, DWR and Reclamation will off-ramp implementation of the Fall X2 requirement (X2 less than or equal to 80 km). Instead, the SWP and CVP will operate to State Water Resources Control Board Water Right Decision 1641 (D-1641) requirements for October.

Collectively, the revisions to the Summer-Fall Action are referred to hereafter as the Proposed Alternative Action.

No changes to SWP facilities or other operations are proposed.

Based on the current conditions and available information, the estimated combined water supply benefit to the Projects with an alternative Fall X2 operation is forecasted to be between 0 and 300 thousand acre-feet (TAF) (between 200 to 300 TAF assuming dry hydrology). The Projects will coordinate on assessing the actual water supply effects to the Projects after the alternative Fall X2 period is over and actual operations have occurred.

DWR has prepared this Addendum for the proposed change to ITP Conditions 9.1.3 and 9.1.3.1 to comply with CEQA (Pub. Resources Code, § 21000 et seq.), augmenting the 2020 *Final Environmental Impact Report for Long-Term Operation of the California State Water Project* (2020 FEIR) (California Department of Water Resources 2020, State Clearinghouse No. 2019049121). As described in this Addendum, the proposed revisions to the ITP do not require revisions to the conclusions or findings presented in the 2020 FEIR because no new or substantially more intense or severe significant environmental impacts or potentially significant environmental impacts would occur.

1.2 Background

The SWP facilities in the Delta provide for delivery of water to areas within and immediately adjacent to the Delta, and to regions south of the Delta consistent with applicable laws, contractual obligations, and agreements. DWR stores, diverts, and conveys water in accordance with DWR's existing water rights to deliver water pursuant to water contracts and agreements up to full contract quantities. The main SWP Delta features are Suisun Marsh and Bay facilities, the Harvey O. Banks Pumping Plant, Clifton Court Forebay, John E. Skinner Delta Fish Protective Facility, Barker Slough Pumping Plant, and SMSCG. The SWP also includes the ongoing operation of existing facilities in coordination with the CVP. The locations of the various facilities of the SWP in the Delta are shown in Figure 1-1.

CDFW approved an ITP on March 31, 2020, for the potential take of four CESA-listed fish species associated with the long-term operation of the SWP facilities in the Delta. DWR's Notice of Determination (NOD) for the 2020 FEIR prepared to support the ITP was filed with the State Clearinghouse on March 30, 2020. In June 2024 DWR requested Major Amendment 9 to the 2020 ITP, which added White Sturgeon as a Covered Species and filed an addendum to the 2020 FEIR and NOD with the State Clearinghouse on June 13, 2024.

The 2020 FEIR evaluated six alternatives, including the No Project Alternative. DWR selected Refined Alternative 2b as the environmentally preferred alternative that would be implemented as the long-term operation of the SWP. Refined Alternative 2b includes a suite of operations-related elements to minimize impacts on aquatic species and additional actions to benefit CESA-listed fish species in the Delta.

As explained in the 2020 FEIR, seasonal timing of exports differs from historical operations under Refined Alternative 2b, but the total volume of exports would generally be expected to remain the same. Additionally, Refined Alternative 2b includes a collaborative real-time risk assessment approach to OMR flow management that provides CDFW with greater authority to curtail exports to minimize entrainment-related effects on CESA-listed fish species and includes a behavioral modification barrier at Georgiana Slough to minimize emigrating juvenile Chinook Salmon entrance into the Central Delta. Refined Alternative 2b also commits DWR to implementing its proportional share of OMR restrictions when such restrictions are recommended by the Water Operations

Management Team or required by CDFW. Refined Alternative 2b also includes adaptive management actions such as convening an Adaptive Management Team that will develop and implement an Adaptive Management Program.

CDFW and DWR will oversee efforts to monitor and evaluate SWP operations and related activities, use structured decision-making to assess the relative costs and benefits of those operations and activities, and will identify changes to those operations and activities, if needed to maintain species protections. The major environmental benefits associated with implementing Refined Alternative 2b, include the shifting of spring maintenance flows to develop up to 150 TAF of water for use in the Summer-Fall period of the current year or spring-fall of the following year (except if the following year is a "critical" water year), and providing an adaptively-managed 100-TAF block of water to supplement Delta outflow any time between June and October of "wet" and "above normal" water years or deferring a portion of the 100 TAF to the following year for deployment (except if the following year is a "critical" water year). The components of Refined Alternative 2b were included as Conditions of Approval in the ITP. DWR is committed to implementing the Conditions of Approval.

The requested minor amendment to ITP No. 2081-2019-066-00 to revise Conditions 9.1.3 and 9.1.3.1 is in response to recent Delta Smelt life cycle modeling showing there was relatively little statistical support for fall outflow being correlated with Delta Smelt survival (Polansky et al. 2021; Smith et al. 2021; Polansky et al. 2024), consistent with the suggestion that summer outflow management may be more effective than fall outflow management based on bioenergetics modeling (Smith and Nobriga 2023).

All other provisions of the 2020 ITP would remain in effect, and all operations would continue to comply with applicable laws, contractual obligations, and agreements. All provisions in the amended 2020 ITP and operation of the SWP will continue to protect the five species covered under the amended 2020 ITP after the proposed revisions to the ITP are accepted by CDFW and the ITP is amended.

1.3 Purpose of the Environmental Impact Report Addendum

According to Section 15164(a) of the CEQA Guidelines, the lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 requiring preparation of a subsequent EIR have occurred. Section 15162 of the CEQA Guidelines lists the conditions that would require the preparation of a subsequent EIR rather than an addendum. These include the following:

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time of the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

    a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

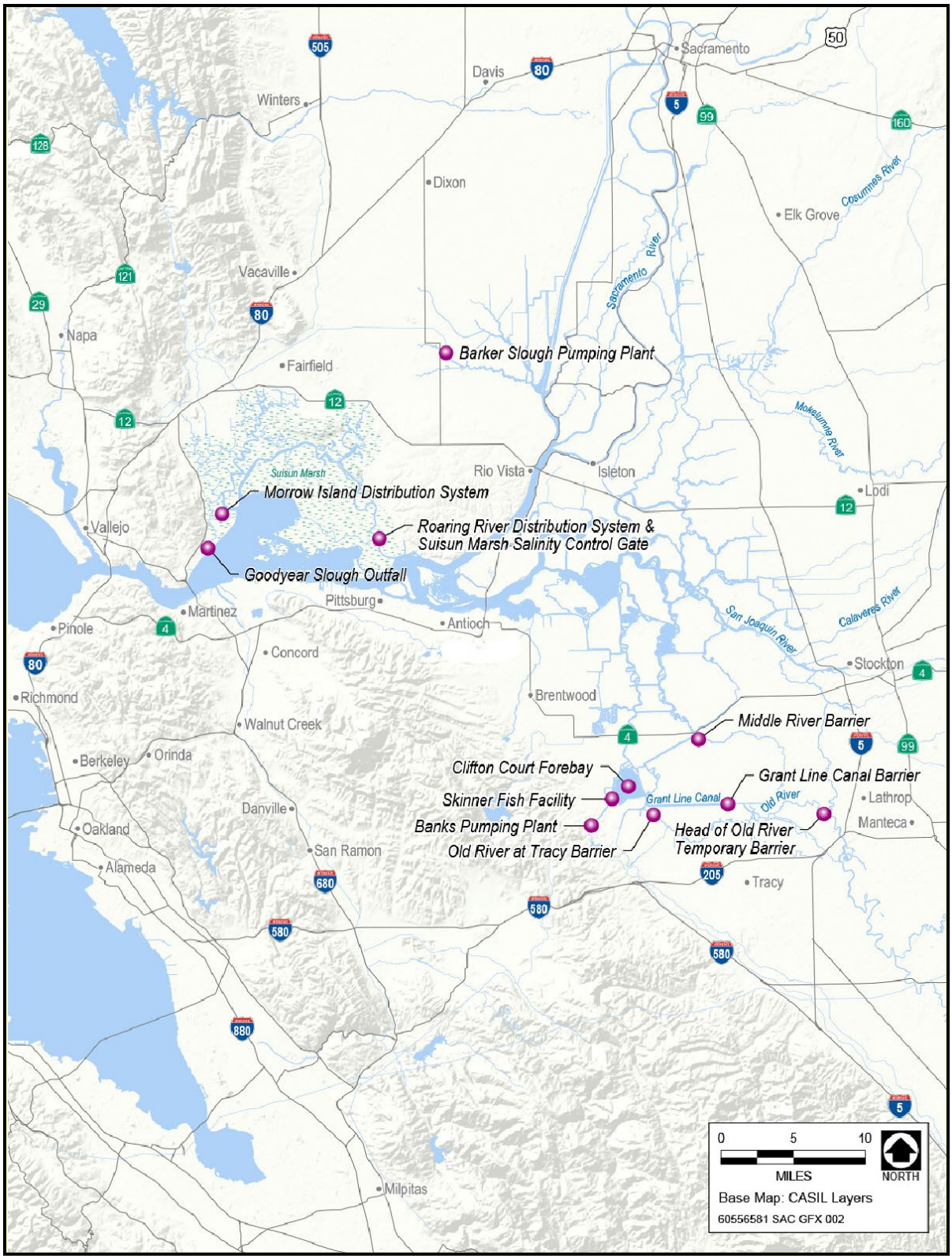
    b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;

    c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the Project, but the project proponents decline to adopt the mitigation measure or alternative; or

    d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

This Addendum concludes that the proposed change to Conditions 9.1.3 and 9.1.3.1 of the amended 2020 ITP does not trigger any of the CEQA Guidelines Section 15162 conditions described above. This is because the proposed change to the ITP does not require revisions to the conclusions or findings presented in the 2020 FEIR because no new or substantially more intense, severe significant environmental impacts, or potentially significant environmental impacts would occur.

The level of protection for the five covered species, as well as other aquatic species evaluated in the 2020 FEIR will not change as a result of the requested amendment to Conditions 9.1.3 and 9.1.3.1 of the amended 2020 ITP. The requested amendment to Conditions 9.1.3 and 9.1.3.1 would modify the *Summer-Fall Action* in 2024 to include operation of the SMSCG in September 2024 and relaxation of the Fall X2 action in October while operating to D-1641 water quality requirements. DWR does not propose changes to any other ITP conditions.



Source: California Department of Water Resources 2020.

Figure 1-1. State Water Project Facilities Located in the Delta

Chapter 2
Environmental Review

2.1 Summary of Previous Environmental Review Process

The effects on the environment of long-term operation of the SWP facilities in the Delta and issuance of an ITP to provide incidental take coverage for four CESA-listed fish species were addressed in the 2020 FEIR. The amendment of the 2020 ITP in 2020 to add White Sturgeon as a covered species was covered under an addendum to the 2020 FEIR in June 2024.

The analyses presented in the 2020 FEIR concluded that the Proposed Project and the alternatives considered would have either no impact or a less-than-significant impact on the environment. DWR selected Refined Alternative 2b as the long-term operation of the SWP.

Further, DWR's environmentally preferred alternative, Refined Alternative 2b, proposed mitigation to meet the legal standard under CESA to minimize and fully mitigate the take of listed species consistent with DWR's application for an ITP. Refined Alternative 2b provides additional freshwater flows in the spring and summer, and physical barriers and other deterrents to keep fish away from the SWP pumps. Implementation of this alternative is expected to result in multiple environmental benefits that would contribute to the greater protection of special status aquatic species than historical operations.

Refined Alternative 2b was determined to have less than significant impacts on all environmental resources evaluated and includes mitigation that minimizes and fully mitigates impacts to CESA-listed fish species. Therefore, the long-term operation of the SWP and issuance of the ITP:

1. Will not degrade environmental quality, substantially reduce habitat, cause a wildlife population to drop below self-sustaining levels, reduce the number or restrict the range of special-status species, or eliminate important examples of California history or prehistory.
2. Does not have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.
3. Will not have impacts that are individually limited but cumulatively considerable.
4. Will not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

The environmental analyses and findings presented in the 2020 FEIR reflect the independent judgment of DWR as the lead agency under CEQA.

2.2 Environmental Analysis

This section of the addendum analyzes the potential effects on the physical environment from implementing the proposed change to the *Summer-Fall Action* (ITP Conditions 9.1.3 and 9.1.3.1). This analysis has been prepared to determine whether any of the conditions in Section 15162 or 15163 of the State CEQA Guidelines (as described in Section 1.3) would occur as a result of the proposed minor revisions to the ITP.

2.2.1 Topics Considered in This Addendum

The proposed changes are to modify ITP the *Summer-Fall Action* in September and October 2024 allow for operation of the SMSCG in September and relaxation of the Fall X2 action in October while operating to D-1641 water quality requirements.

These proposed changes would not modify the long-term operations or substantively modify the actions evaluated in the 2020 FEIR. Therefore, the proposed changes would not result in new significant impacts or a substantial increase in the intensity or severity of environmental effects for any of the following topic areas:

- Agricultural Resources
- Geology, Soils, and Mineral Resources
- Water Quality
- Noise
- Visual Resources
- Utilities and Service Systems
- Hazards and Hazardous Materials
- Environmental Justice
- Biological Resources
- Cultural Resources
- Tribal Cultural Resources
- Recreation
- Transportation and Circulation
- Air Quality
- Hydrology and Hydraulics

Additional analysis on biological resources related to the proposed change is provided in analysis below.

2.2.2 Analysis of the Request to Modify the Delta Smelt Summer-Fall Habitat Action

2.2.2.1 Proposed Change to the Delta Smelt Summer-Fall Habitat Action

Condition 9.1.3 is intended to benefit Delta Smelt food supply and habitat, thereby contributing to the recruitment, growth, and survival of Delta Smelt. The *Summer-Fall Action* is intended to provide low salinity, relatively high turbidity, low water temperatures, and high food availability in the Suisun Marsh and Grizzly Bay through a range of actions by water year type to improve water quality and food supplies. As part of the *Summer-Fall Action*, Condition 9.1.3.1 requires DWR to develop a plan to operate the SMSCG during June, July, and August of Above Normal, Dry, and Critical water years and maintaining X2 at less than or equal to 80 km from the Golden Gate Bridge during September and October of Wet and Above Normal water years. The *Summer-Fall Action Plan* is developed based on hydrologic, operational, and temperature forecasts using the best available modeling.

Maintaining X2 at less than or equal to 80 river kilometers (Rkm) during September and October of Wet and Above Normal water years is referred to as the Fall X2 Action. The purpose of the Fall X2 action is to move the low salinity zone (0.5–6 psu) into Suisun Bay where Delta Smelt historically and primarily reared during the fall and winter months of wetter year types. The Fall X2 Action is achieved through a combination of SWP and CVP reservoir releases and export reductions.

DWR proposes to amend Conditions 9.1.3 and 9.1.3.1 by implementing an alternative to the *Summer-Fall Action* and seeking participation from Reclamation and corresponding CVP operations to account for real-time information and results generated from recent life cycle model (Polansky et al. 2024) analyses. The Proposed Alternative Action includes:

- Implementing the September Fall X2 requirement (X2 less than or equal to 80 Rkm) as described in the 2019 USFWS Biological Opinion and 2020 ITP.
- Operating the SMSCG daily from September 6 through September 30.
- Beginning October 1st, DWR and Reclamation will off-ramp implementation of the Fall X2 requirement (X2 less than or equal to 80 Rkm). Instead, the SWP and CVP will operate to D-1641 requirements for October.

2.2.2.2 Adaptive Management

The Proposed Alternative Action for 2024 provides an opportunity to test the efficacy of the Fall X2 action. In 2023, the Fall X2 Action was implemented in September and October with the additional SMSCG operation in September. Operation of the SMSCG during the late summer period has been shown to improve habitat area and conditions for Delta Smelt with respect to salinity in Suisun Marsh, thereby positioning the main area of Delta Smelt habitat in an area of relatively higher food production (Sommer et al. 2020), and potentially leading to positive bioenergetic effects on Delta Smelt (Smith and Nobriga 2023). Hydrology has not aligned in back-to-back years to allow for a direct comparison of testing of the Fall X2 Action for adaptive management purposes. A with and without comparison of implementing the Fall X2 Action in October allows for DWR and Reclamation to test action performance with respect to Delta Smelt abundance, growth, and habitat conditions between 2023 and 2024 operations using the USWFS Delta Smelt Life Cycle Model.

2.2.2.3 Delta Coordination Group (DCG)

The DCG[1] team is responsible for developing the annual Summer-Fall Habitat Action Plan and associated Monitoring and Science Plan. Since 2021, the DCG has been using a structured-decision making (SDM) framework to evaluate potential actions that included consideration of performance objectives and regulatory constraints. Considerations of water cost impacts were discussed but not included in the decision-scope for 2024. DCG's primary management objective for 2024 focused on an approved plan that increased suitable habitat attributes, including low salinity, high turbidity, and relatively cooler water temperatures.

[1] The DCG includes representatives from the 5-agencies and SWP/CVP contractors.

For 2024, the DCG developed the following hypotheses:

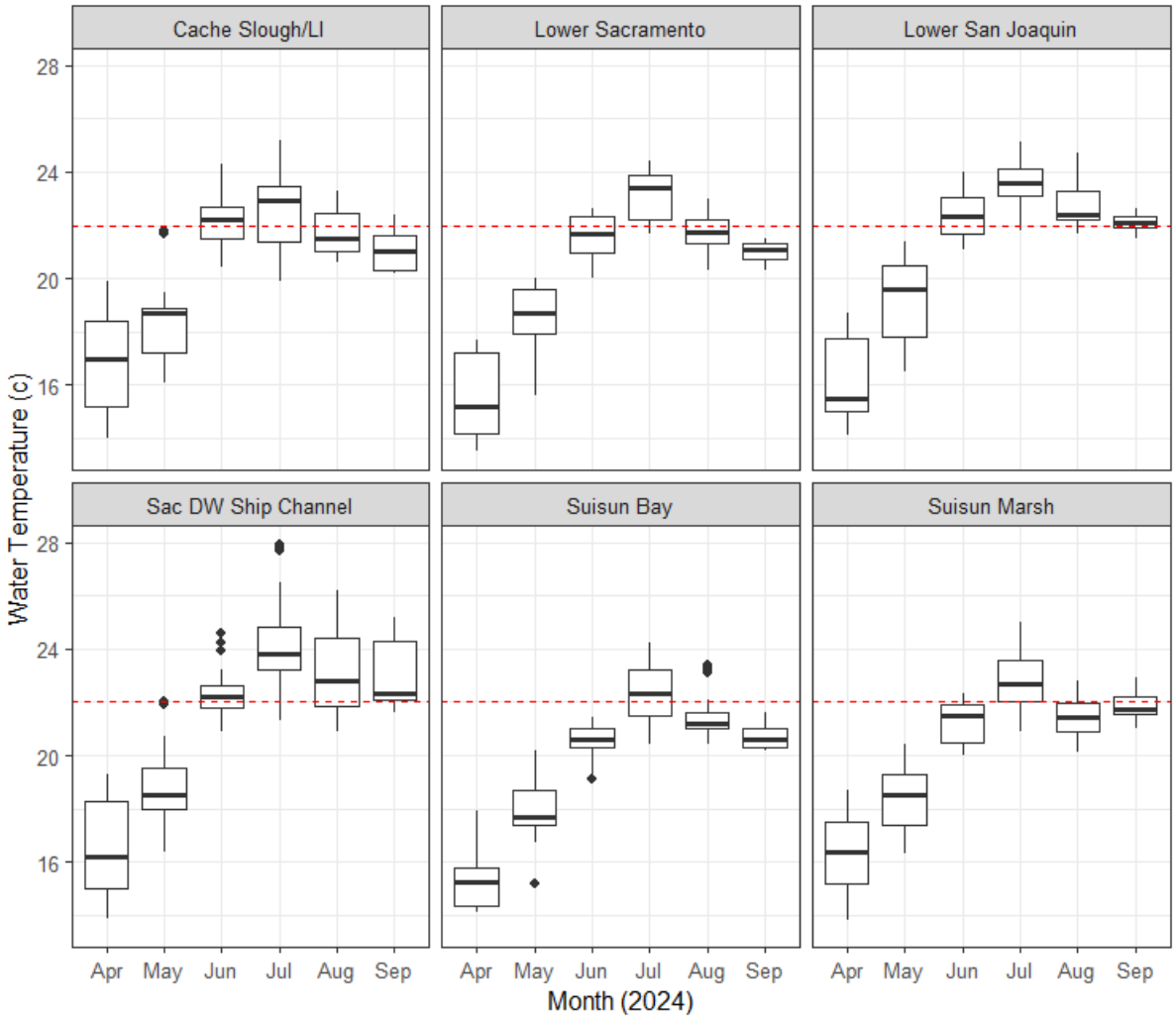
- Decreasing X2 will maximize the area of Delta Smelt habitat with appropriate water temperatures, turbidity, and salinity, which will result in higher Delta Smelt growth and survival.
- Decreasing X2 will increase biomass of calanoid copepods, specifically *Pseudodiaptomus forbesi* abundance in Suisun Bay will increase through increased transport of freshwater species from upstream, which will result in higher Delta Smelt growth and survival.
- Operating the SMSCG during the summer and fall will maximize the duration and area of Delta Smelt habitat with appropriate temperatures, turbidity, and salinity, which result in higher growth and survival.
- Operating the SMSCG during the summer and fall will increase biomass of calanoid copepods, specifically, *Pseudodiaptomus forbesi*, in Suisun Marsh through increased transport of freshwater species from upstream, which will result in higher Delta Smelt growth and survival.

Both the management objectives and hypotheses remain unchanged for the Proposed Alternative Action. DWR and Reclamation will continue to implement the Summer-Fall Habitat Monitoring and Science Plan[2] through October 2024, which was recently peer-reviewed by an independent panel of experts.

2.2.2.4 Justification for the Proposed Alternative Action

In early 2024, over 90,000 hatchery adult cultured Delta Smelt were released into the upper San Francisco Estuary from Suisun Bay to Cache Slough Complex. It is currently believed that hatchery Delta Smelt represent the majority, if not the entire, population of Delta Smelt in the wild. In 2024, adult Delta Smelt successfully spawned in the wild, resulting in population estimates of juvenile and post-larval Delta Smelt of greater than 2 million individuals the week of April 5, 2024 (Abundance index of 2,453,239, 95% confidence interval of 667,028–6,453,026; Preliminary Analysis of the Enhanced Delta Smelt Monitoring Program (EDSM) (available at EDSM Weekly Report | FWS.gov). Delta Smelt catches remained relatively high through most of May. However, EDSM catches were low in June during its "20-mm" trawls and since July, when the program restarted its Kodiak trawl sampling, only one Delta Smelt has been observed (in August in Suisun Bay). Note, the lack of observations of Delta Smelt in the trawls during July and August does not indicate that the population went to zero in the estuary. Rare fish are difficult to detect in the wild. Nevertheless, the reduction in catches suggests that Delta Smelt incurred high mortality beginning in late May or early June. This pattern would be consistent with observations from 2017, when warm summer conditions resulted in lower fall abundance of Delta Smelt (Flow Alteration–Management, Analysis, and Synthesis Team 2020). In many areas of the estuary, data collected by EDSM during their daytime surveys showed water temperatures elevated above levels that current information suggests could impair growth (greater than 22°C) for Delta Smelt (Figure 2-1).

[2] Summer-Fall Habitat Action Monitoring and Science Plans and Structured Decision Making Approach Peer Review (ca.gov)



The red dashed line indicates temperatures of 22°C.

Figure 2-1. Boxplots Showing Water Temperatures in Degrees Celsius Collected by the Enhanced Delta Smelt Monitoring Program during Weekly Surveys by Month of 2024 in Each of the Major Strata of the Delta, Suisun Bay, and Suisun Marsh

The least stressful water temperatures in June - August were observed in Suisun Bay and Suisun Marsh, the locations where Fall X2 and SMSCG actions are intended to directly benefit Delta Smelt. The SMSCG component of the Proposed Alternative Action is intended to provide increased habitat where suitable water temperatures overlap, which may be especially important given the heat wave that occurred in the first week of September.

A recently published life cycle model analysis shows that Delta Smelt summer survival is strongly correlated with summer outflow, whereas fall survival is weakly correlated to fall outflow (Polansky et al. 2024). Thus, the statistical life cycle model best explaining Delta Smelt population growth includes summer outflow but not fall outflow (Polansky et al. 2024). USFWS summarized the previously published life cycle model summer and fall flow results (Polansky et al. 2021, 2023, 2024) for the analysis of the Proposed Action in their draft Long-term Operations Biological Opinion, concluding that Fall X2 component of the Summer-Habitat action was not likely to affect Delta Smelt survival. Another recent life cycle model effort found that the area of low-salinity habitat was not among the predictors with highest evidence for relationships with trends in Delta Smelt population abundance indices (Polansky et al. 2021). Polansky et al. (2021) also found that September–November X2 was negatively correlated to the subsequent year's recruitment (adult to larval survival); however, as illustrated by plots of the predicted relationship with associated credible intervals from statistical modeling (Polansky et al. 2021: Figures 1 and C.1), there is appreciable statistical uncertainty in the relationships, which are based on annual mean values across water years. September–November X2 thus was not included in the subsequent modeling effort by Smith et al. (2021), which focused only on the relationships found by Polansky et al. (2021) to have the most evidence of having an effect in the hypothesized direction. The modeling by Smith et al. (2021) forms the basis of the Delta Smelt Life Cycle Model with Entrainment, for which the only operations-related inputs based on statistical support from analysis of the historical data are (1) Old and Middle River flows during various averaging periods in December through June as indicators of entrainment risk across various early life stages, and (2) June–August Delta outflow as an omnibus indicator of habitat conditions in the summer (ICF 2023:Appendix D, D-478). In short, the offramp from implementing X2 at 80 km in October is not anticipated to have effects on Delta Smelt survival.

2.2.2.5 Modeling Analysis

DSM2 modeling was used to evaluate the effects in the western Delta where two modeling scenarios were developed using median (50%) expected hydrology and SWP/CVP operations. The required Net Delta Outflow Index (NDOI) to meet an X2 of 80 km was estimated based on operations in 2023 and applied to the SWP/CVP operations models for the fall action in 2024.

Two modeling scenarios were completed to evaluate the expected change in western Delta and Suisun Marsh between:

1. Baseline conditions – where the SWP/CVP manage X2 at 80 km for September and October.
2. Proposed Action – where the SWP/CVP manage X2 at 80 km for September, but not in October. With this Proposed Alternative Action, the SMSCG is operated tidally from September 6 to September 30.

Table 2-1 shows the assumed NDOI for these two scenarios, where September and October NDOI is very similar for the Baseline scenario, which assumes meeting X2 of 80 km in both months. Under the Proposed Alternative Action, the NDOI increases in September with the addition of the SMSCG tidal operation, where additional flow is needed to compensate for the SMSCG operation. In October the assumed NDOI is roughly what is expected to be needed for managing water quality.

Table 2-1. DSM2 Modeling Assumptions Used to Evaluate Potential Effects of the Proposed Alternative Action

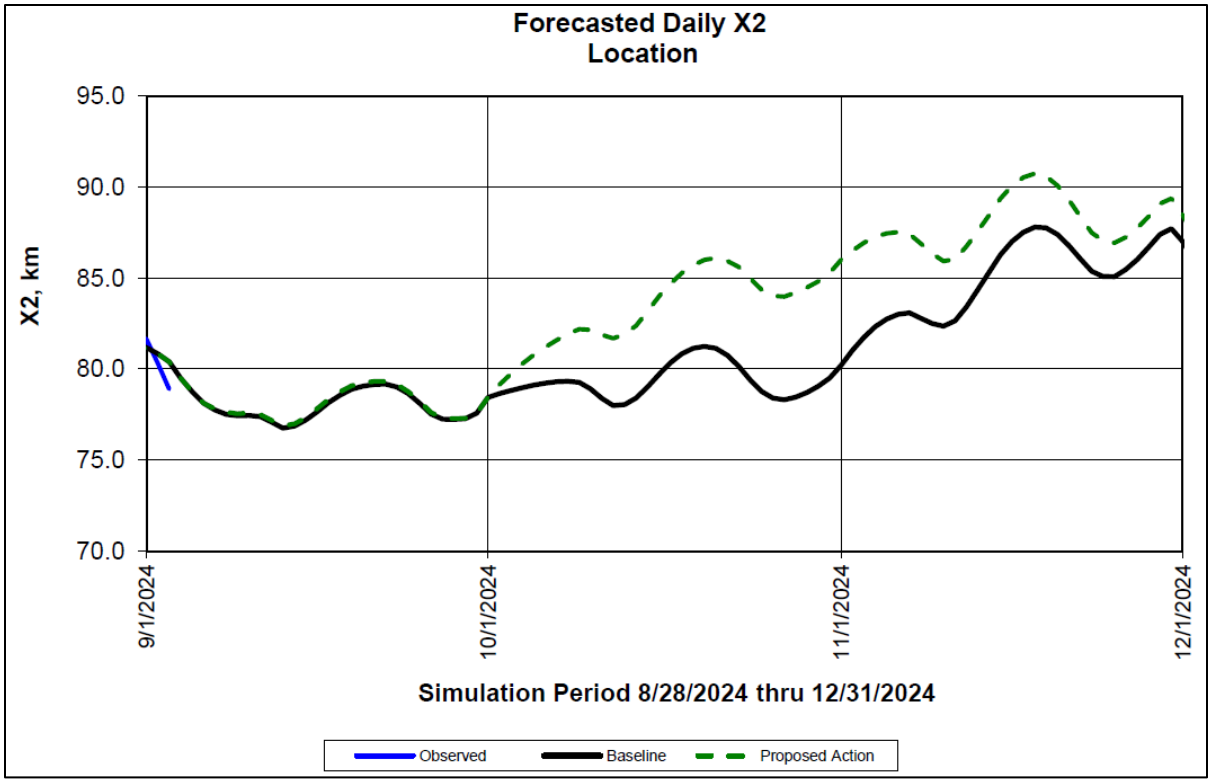
	September NDOI (cfs)	September SMSCG Operations (number of days)	October NDOI (cfs)	October SMSCG Operations (number of days)
Baseline	9,504	0	9,500	0
Proposed Action	10,344	25	4,800	0

NDOI = Net Delta Outflow Index; SMSCG = Suisun Marsh Salinity Control Gates; cfs = cubic feet per second.

2.2.2.6 Modeling Results

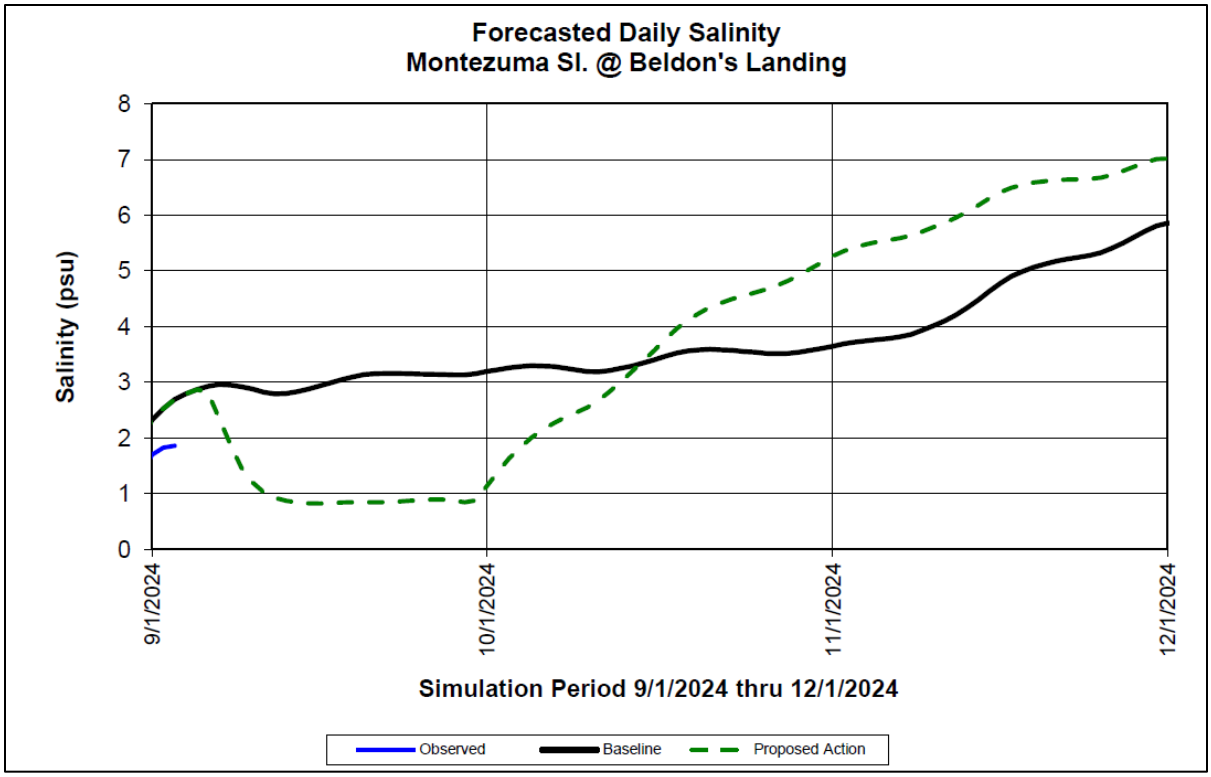
Two primary variables were evaluated in the analysis: (1) change in the position of X2, and (2) change in salinity at Belden's Landing. Figure 2-2 shows the change in X2 position between the Baseline and the Proposed Alternative Action, where the Baseline X2 is maintained at a monthly average of 80 km until the beginning of November at which time the X2 begins moving upstream. Under the Proposed Alternative Action, X2 is maintained at 80 km only until the beginning of October at which time it is allowed to move upstream. The modeled average X2 under the Proposed Alterative Action is 83.2 km for October. Both scenarios begin to converge in November and are within 1 km to 2 km near the end of November.

Figure 2-3 shows the change in Belden's Landing salinity. Under the Baseline scenario, salinity at Belden's Landing ranges from approximately 3 to 4 psu over September to October, whereas with the Proposed Alternative Action, salinity is significantly reduced, down to about 1 psu for most of September and then trending to just below 6 psu once the SMSCG is assumed to cease tidal operation in October. The modeled variation in salinity changes fall within the low salinity habitat range for Delta Smelt (1–6 psu; see Brown et al. 2014).



Observed = observed X2; km = kilometer; Proposed Action = Proposed Alternative Action.

Figure 2-2. Resulting Daily Average Position of X2 under Baseline Conditions and under the Proposed Alternative Action



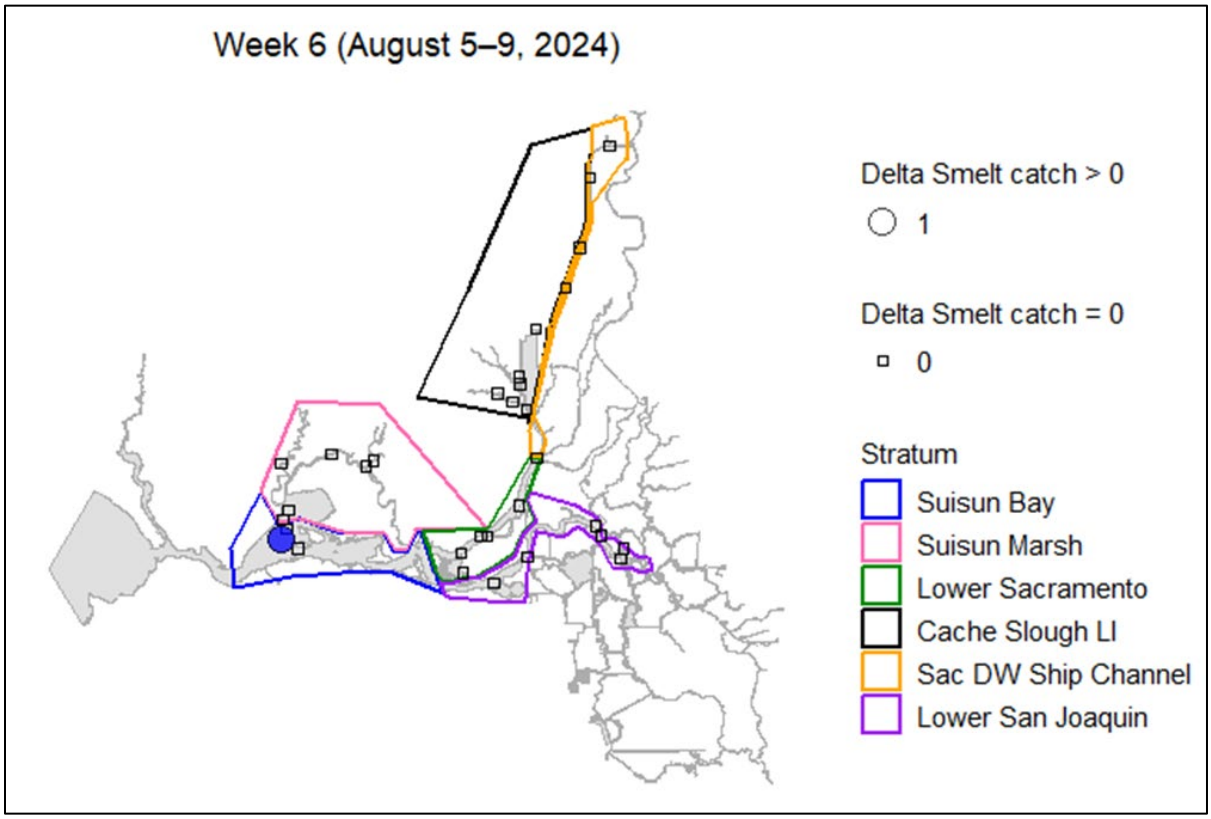
Observed = observed salinity; psu = practical salinity units.

Figure 2-3. Resulting Daily Average Salinity at Beldon's Landing under Baseline Conditions and under the Proposed Action

2.2.2.7 Analysis of Effects to Delta Smelt

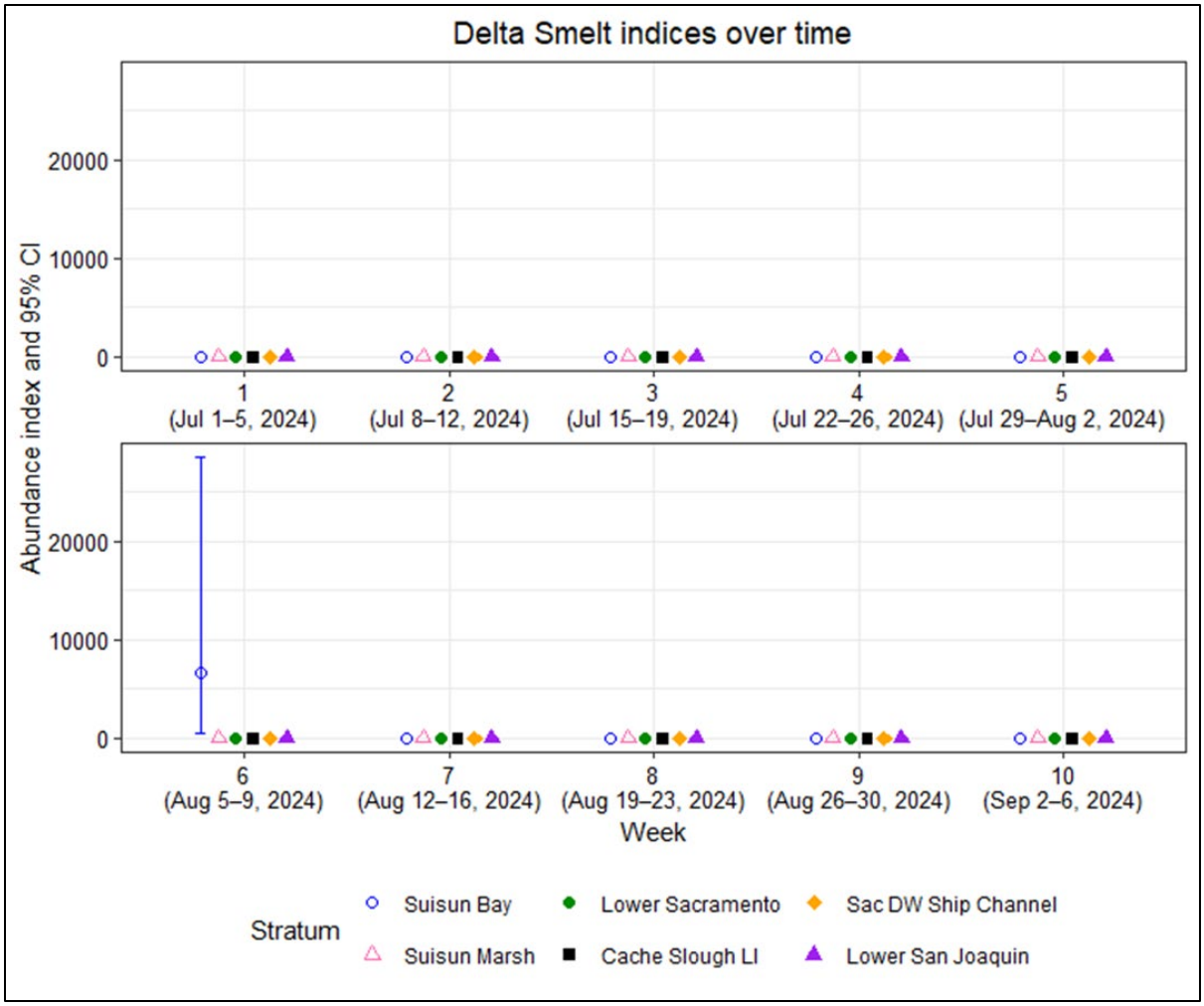
Current Delta Smelt Spatial Distribution and Population Status

The EDSM's Phase 3 sampling program for juvenile and subadult Delta Smelt began on July 1, 2024. Between that date and the most recently available survey (September 2–6), only one Delta Smelt has been collected (Suisun Bay, Week 6, August 5–9, 2024; Figure 2-4). Most population abundance indices therefore are zero, with the Week 6 estimate being 6,592 fish (95% confidence interval of 557–28,491; Figure 2-5). The observation of a single fish in Suisun Bay is consistent with prior observations that most Delta Smelt rear in the low salinity zone during the time period that the Proposed Alternative Action would occur (Hobbs et al. 2019). The focus of the analysis below therefore is mostly on the low salinity zone.



Source: U.S. Fish and Wildlife Service 2024.

Figure 2-4. Total Delta Smelt Catch by Site in Week 6 (August 5–9, 2024) of Phase 3 of the Enhanced Delta Smelt Monitoring Program, 2024



Source: U.S. Fish and Wildlife Service 2024.
Note: Point represents abundance index estimate, whiskers represent 95% confidence interval.

Figure 2-5. Delta Smelt Abundance Index by Week and Stratum, Phase 3 of the Enhanced Delta Smelt Monitoring Program, 2024

State Water Project and Central Valley Project Entrainment

Delta Smelt are not likely to be entrained at the south Delta export facilities during the fall based on historical data (e.g., Brown et al. 2014). Therefore, differences in south Delta exports because of the Proposed Alternative Action would not result in take by entrainment.

Extent of the Low Salinity Zone and Abiotic Habitat Index

The Proposed Alternative Action is modeled to shift the average October from 79.2 km to 83.2 km (4 km). Based on the relationships between X2 and Delta Smelt low salinity zone extent (Table 2-2, reproduced from Brown et al. 2014) and between X2 and an index consisting of the area of abiotic habitat weighted by the probability of Delta Smelt occurrence based primarily on Secchi depth and conductivity (Feyrer et al. 2011; Table 2-3, reproduced from Brown et al. 2014), the Proposed Alternative Action would likely decrease low salinity zone extent and abiotic habitat, decreasing the overall low salinity zone extent from 7,369 hectares (18,209 acres) to 5,075 hectares (12,541 acres; Table 2-2) and the habitat index for October from 5,292 to 4,081 (Table 2-3). This will result in less habitat in Suisun Marsh and Grizzly Bay, with remaining low salinity zone habitat restricted to Honker Bay and upstream (Figure 2-6). While habitat area will decrease in October, there is high uncertainty if this effect will translate in any population effects given recent life cycle model results (Polansky et al. 2021, 2024). Additionally, the SMSCG component of the Proposed Alternative Action is intended to provide lower salinity (see Figure 2-3) and increased access to Suisun Marsh for Delta Smelt (Sommer et al. 2020), where feeding opportunities may be relatively high compared to adjacent areas such as Suisun Bay (Hammock et al. 2015). Lowering salinity in Suisun Marsh during September would allow low salinity habitat (< 6 psu) within Suisun Marsh to be maintained to approximately mid-November (Figure 2-3).

Table 2-2. Area of Low Salinity (1–6 psu) by X2 Position

X2 (km)	Area of LSZ (hectares)	X2 (km)	Area of LSZ (hectares)
30	18,324	64	6,981
31	10,933	65	6,999
32	9,544	66	7,912
33	12,675	67	8,467
34	15,432	68	8,474
35	11,423	69	8,743
36	7,413	70	8,500
37	14,905	71	8,632
38	20,693	72	8,539
39	14,154	73	8,585
40	17,138	74	8,408
41	19,969	75	8,231
42	19,421	76	8,380
43	19,131	77	8,162
44	21,651	78	7,959
45	19,746	79	7,369
46	18,021	80	6,653
47	18,525	81	5,313
48	18,450	82	5,051
49	17,743	83	5,075
50	17,590	84	4,753
51	11,525	85	4,483

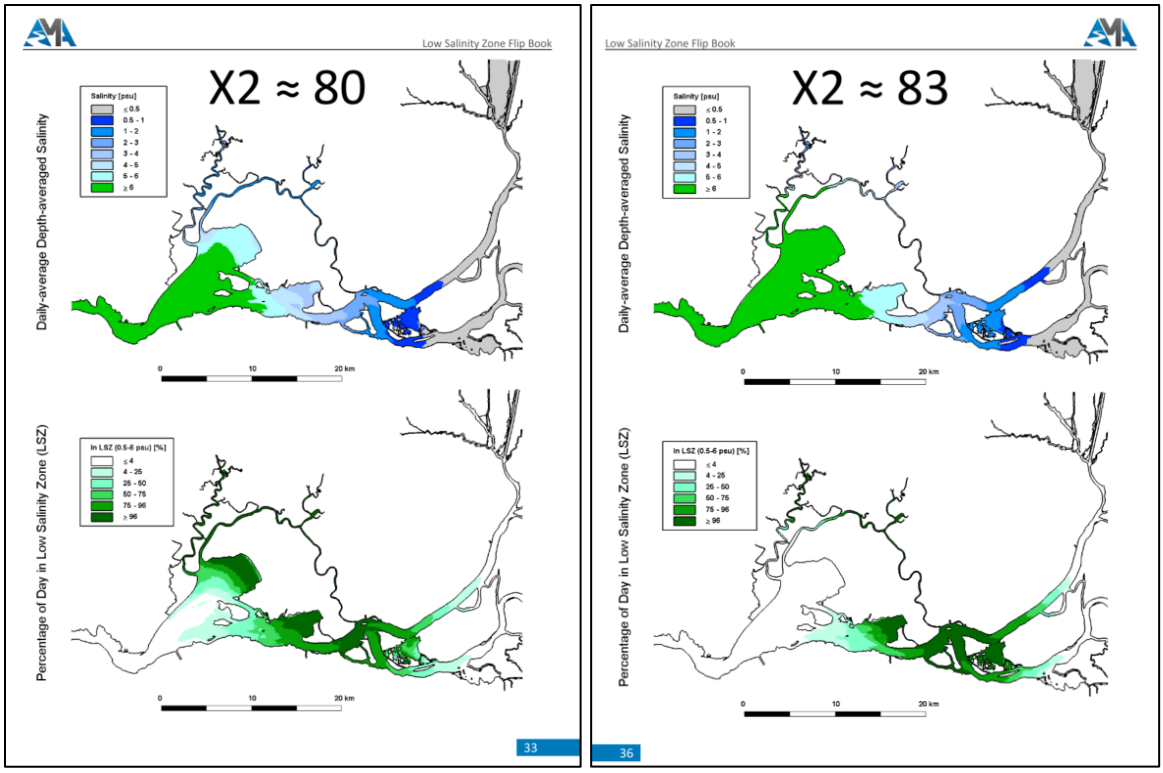
X2 (km)	Area of LSZ (hectares)	X2 (km)	Area of LSZ (hectares)
52	8,908	86	4,492
53	13,429	87	4,456
54	7,313	88	4,463
55	8,576	89	4,604
56	4,284	90	4,635
57	3,530	91	4,653
58	4,244	92	4,655
59	5,127	93	4,953
60	4,813	94	5,000
61	4,498	95	5,025
62	5,773	96	4,996
63	7,007		

Source: Brown et al. 2014: Appendix 2, Surface Area and Maps of the Low-Salinity Zone, Table 2-1.
X2 is the horizontal distance in kilometers from the Golden Gate up the axis of the estuary to where tidally averaged near-bottom salinity is 2.
psu = practical salinity unit; km = kilometer.

Table 2-3. Delta Smelt Habitat Indices by X2 Position

X2 (km)	Predicted habitat index	X2 (km)	Predicted habitat index
61	7,343	78	6,099
62	7,551	79	5,735
63	7,724	80	5,292
64	7,863	81	4,835
65	7,967	82	4,430
66	8,036	83	4,081
67	8,069	84	3,777
68	8,067	85	3,523
69	8,027	86	3,314
70	7,950	87	3,160
71	7,837	88	3,054
72	7,685	89	2,996
73	7,491	90	2,987
74	7,261	91	3,028
75	7,000	92	3,116
76	6,716	93	3,252
77	6,414		

Source: Brown et al. 2014: Appendix 3, Delta Smelt Habitat Index, Table 3-1.
Note: The habitat index weights the probability of occurrence of delta smelt at a fall midwater-trawl (FMWT) station by the surface area associated with that station. The probability of occurrence of delta smelt at a station is based on a general additive model incorporating water temperature, salinity, and turbidity measured at the time fish were sampled. The habitat index was calculated as the average habitat index for the 4 months of the FMWT, September–December. The annual habitat index was then related to mean X2 from September to December by using locally weighted-regression scatterplot smoothing (LOESS regression).

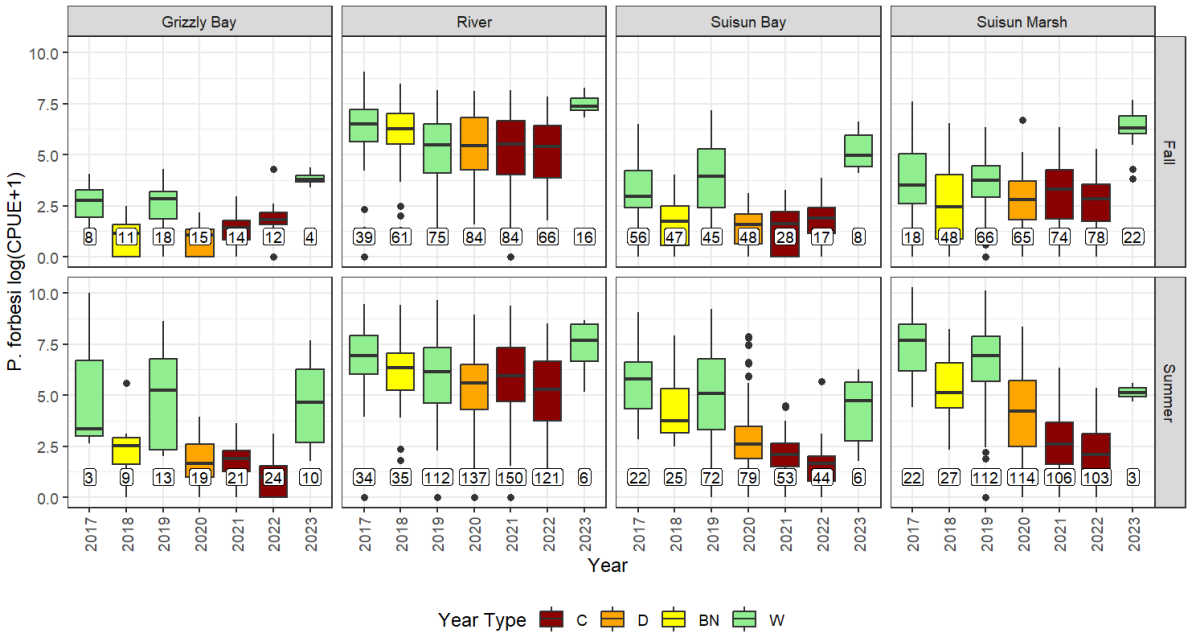


Source: Delta Modeling Associates 2014.

Figure 2-6. Extent of Low Salinity Zone Habitat Predicted at the Baseline Value of X2 (80 km) During October and Model Results for the Proposed Alternative Project Location of X2 (83 km)

Food Availability in the Low Salinity Zone

Recent studies have provided conflicting information on the relationship between fall Delta outflow and food availability in the low salinity zone. Detailed examination of a fall flow action in 2017 compared to 2011–2016 did not provide evidence for an increase in Delta Smelt prey with increased outflow in 2017 (Schultz et al. 2019; Flow Alteration–Management, Analysis, and Synthesis Team 2020). In contrast, Lee et al. (2023) found support for higher abundance of *Pseudodiaptomus forbesi* (*P. forbesi*) in Suisun Bay and Suisun Marsh during years of higher September–November Delta outflow (2017 and 2019) relative to years with lower Delta outflow (2018 and 2020), and a similar trend was described in the 2024 *Summer-Fall Action Plan* (Figure 2-7). Kimmerer et al. (2018a) also found increased abundance in downstream regions with higher flows. However, none of these analyses conclusively linked increased abundance of *P. forbesi* and Delta Smelt growth in the years of higher outflow. These empirical observations of greater *P. forbesi* density with greater Delta outflow are supported by several modeling analyses (Kimmerer et al. 2018b; Hassrick et al. 2023), although it may be difficult to detect increased *P. forbesi* density in the low-salinity zone due to the volume of Delta outflow required (Hassrick et al. 2023). Other analyses have found largely nonlinear relationships between outflow and calanoid copepod biomass in the Delta and Suisun Marsh/Bay, with potential for negative effects of greater September/October outflow on Delta Smelt prey at several locations (Hamilton et al. 2020).



Source: Modified from the 2024 *Summer-Fall Habitat Action Plan* produced by the Delta Coordination Group in spring of 2024.

P. forbesi = *Pseudodiaptomus forbesi*; CPUE = catch per unit effort; C = critical; D = dry; BN = below normal; W = wet.

Figure 2-7. Log-transformed Catch per Unit Effort of the Copepod *Pseudodiaptomus forbesi* in the Lower Sacramento River (River), Suisun Bay, Grizzly Bay, and Suisun Marsh in the Fall (September–October) and Summer (June–August) by Water Year Type

ICF's (2023:4-24) examination of evidence for relationships between Delta Smelt zooplankton prey in the low-salinity zone and fall (September–November), Delta outflow indicated only two taxa (*Eurytemora. affinis* adults and mysids) had statistically significant regression relationships (Table 2-4; also see ICF 2023: Appendix D, Section D.9, *Zooplankton–Delta Outflow Analysis*). Overall, the available information suggests there would be limited effects of the Proposed Action on food availability in the low salinity zone. Additionally, The SMSCG component of the Proposed Alternative Action is intended to provide increased habitat where suitable water temperatures overlap during September (see Figure 2-3), which may offset any potential effects on food availability in October.

Table 2-4. Zooplankton Fall (September–November) Regression Summary, With Bold Indicating Statistically Significant (P<0.05) Regressions

Taxon	Intercept	Slope	R2	P
Acartiella sinensis (copepod) adults	7.658	-0.119	0.005	0.752
Cladocerans except *Daphnia*	14.953	-1.375	0.053	0.300
Copepod nauplii	8.321	0.427	0.095	0.164
Cyclopoid copepods except *Limnoithona* adults	9.852	-0.069	0.002	0.862
Daphnia adults	6.854	-0.729	0.038	0.382
***Eurytemora affinis* (copepod) adults**	**-6.972**	**0.908**	**0.234**	**0.023**
Harpacticoid copepods	4.114	0.054	0.000	0.960
Limnoithona (cladoceran) adults	5.613	0.542	0.173	0.054
Mysids	**-7.945**	**1.153**	**0.213**	**0.018**
Other calanoid copepod adults	6.321	-0.436	0.012	0.621
Other calanoid copepod copepodites	2.286	0.359	0.032	0.426
Pseudodiaptomus (copepod) adults	11.444	-0.581	0.146	0.080
Pseudodiaptomus (copepod) copepodites	10.184	-0.484	0.047	0.334

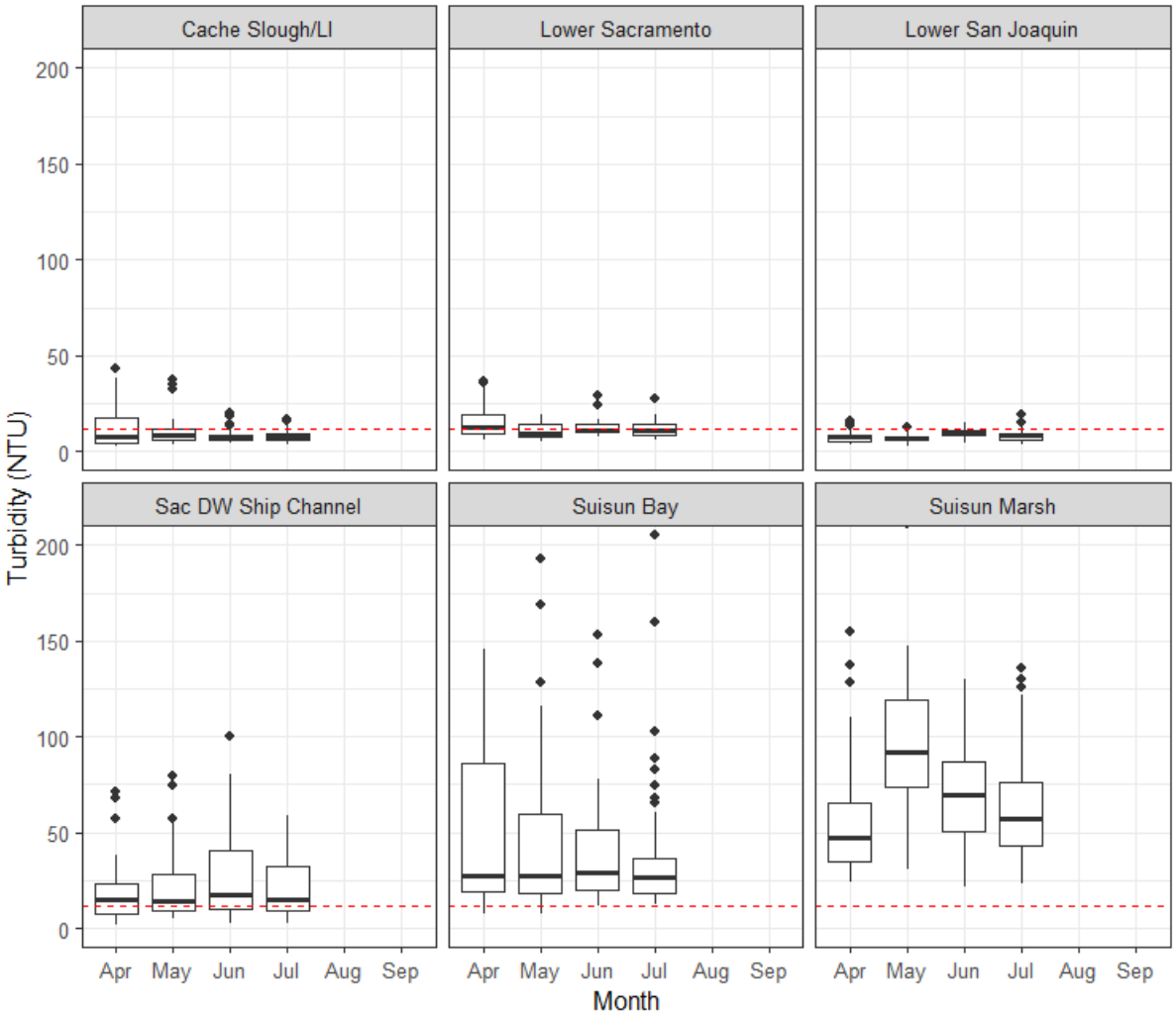
Source: ICF 2023: Appendix D, D-478.

Note: Regressions were $\log_e$(mean annual catch per cubic meter+1) = $\log_e$(mean annual Delta outflow).

Water Clarity in the Low Salinity Zone

Greater water clarity tends to be correlated with lower probability of Delta Smelt occurrence in fall (e.g., Feyrer et al. 2011); higher turbidity decreases stress (Pasparakis et al. 2023) and lowers predation (Ferrari et al. 2014). Prior analyses have demonstrated statistically significant positive relationships between X2 and mean Secchi disk depth in the low salinity zone (ICF 2017:106), which supported hypotheses by Brown et al. (2014). The trends in these relationships suggest that mean X2 during the Proposed Alternative Action could result in some effects during October but there is high uncertainty in both the spatial extent of Delta Smelt occupancy and whether water clarity will decrease in October. Note that there may be an effect of antecedent conditions: generally high outflow in wetter years would lead to greater amounts of sediment for resuspension in the low-flow, fall months of such years, which would tend to give lower fall Secchi disk depth measurements at times when X2 during the fall months would be relatively low (because of antecedent conditions).

In water year 2024, turbidity was generally at favorable levels (> 12 NTU) for Delta Smelt during the summer in Suisun Bay and Suisun Marsh, but not in other areas of the estuary (Figure 2-8). Implementation of the SMSCG component of the Proposed Alternative Action is anticipated to maintain overlap of suitable habitat conditions, including water temperature, salinity, and turbidity. The off-ramp from implementing X2 at 80 km in October is unlikely to result in effects to Delta Smelt survival based on recent results from Polansky et al. (2021, 2024).



The red dashed line indicates 12 NTU, above which Delta Smelt are caught more frequently. August and September data were not available at time of writing.

Figure 2-8. Boxplots Showing Turbidity Collected by the Enhanced Delta Smelt Monitoring Program during Weekly Surveys by Month of 2024 in Each of the Major Strata of the Delta, Suisun Bay, and Suisun Marsh

Water Temperature in the Low Salinity Zone

Delta Smelt generally occur within a 7-25°C temperature range (Sommer and Mejia 2013), with high temperatures leading to increased stress, behavioral changes, and reduction in growth across their life history (Smith and Nobriga 2023; Davis et al. 2019; Lewis et al. 2021). High summer temperatures are thought to be an important factor limiting summer survival (Flow Alteration–Management, Analysis, and Synthesis Team 2020; Smith and Nobriga 2023). Prior statistical analyses have found limited evidence for positive relationships between X2 and water temperature in the low salinity zone (ICF 2017:115), indicating that the difference in X2 as a result of the Proposed Alternative Action would likely have minimal effect on water temperature in the low salinity zone during October. Implementation of the SMSCG component of the Proposed Alternative Action is anticipated to maintain overlap of suitable habitat conditions, including water temperature in September.

Cyanobacteria Harmful Algal Blooms

The Interagency Ecological Program, Management, Analysis, and Synthesis Team (2015:88–89) conceptual model for Delta Smelt posited a linkage between various factors (nutrients, summer hydrology, and air temperature) and toxicity from cyanobacteria harmful algal blooms (cHABs) to Delta Smelt and their prey. Residence time is positively related to cyanobacteria abundance, but recent analysis indicates that the low salinity zone is not a useful proxy for residence time in the area of the Delta that experiences the most severe cHABs and that climatic conditions (temperature and water year type) have the greatest influence on *Microcystis* abundance (Preece and Hartman 2024). Therefore, the Proposed Alternative Action would likely have minimal effect on cHABs.

Impacts to Delta Smelt

Because the Proposed Alternative Action would have limited effects on Delta Smelt survival, entrainment, extent of the low salinity zone, food availability, water clarity, water temperature, and cHABs, impacts associated with this proposed change would be **less than significant**.

All other provisions of the ITP would remain in effect. No changes to SWP facilities or other operations are proposed and, thus, would have no impact on the species.

2.2.2.8 Analysis of Effects to Other Listed, Candidate, Native, and Recreationally or Commercially Important Fish Species

Longfin Smelt would not be likely to be affected by the proposed 2024 Fall X2 action because they tend to be downstream of the potential location of effect of the actions (ICF 2023:4-66). There would not be expected to be any effect on juvenile winter-run or spring-run Chinook Salmon or steelhead from the Proposed Alternative Action because they do not migrate through the estuary during the fall. There are no anticipated effects to adult Chinook Salmon or steelhead migrating upstream due to the Proposed Alternative Action because there is no evidence to suggest that changes in the low salinity zone location would impact their migration cues to upstream natal habitats. Green Sturgeon and White Sturgeon are found in Suisun Bay and Suisun Marsh during the summer and fall months. There is no evidence that salinity or X2 location would impact their rearing conditions because they freely move between brackish and freshwater habitats (Miller et al. 2020; Sellheim et al. 2022; Thomas et al 2022).

SMSCG operations are not anticipated to have any effects on adult Chinook Salmon or steelhead migrating upstream during September because they are able to pass from Montezuma Slough to the Sacramento River using SMSCG boat locks. Similarly, the SMSCG action is not anticipated to affect White Sturgeon and Green Sturgeon in September because they are only expected to make localized movements in the fall. Like Chinook Salmon, they can use the boat locks to move between Montezuma Slough and the Sacramento River.

Effects of changes to the low salinity zone on other native fish species, and recreationally or commercially important fish species are not well known. However, because these species inhabit the Delta, Suisun Marsh, and Suisun Bay, which is a highly dynamic environment, changes to the low salinity zone would not be expected to limit rearing habitat availability or impede migration for similar reasons to those described for salmonid and sturgeon species. Specifically, rearing habitat is abundant throughout the Delta and Suisun Bay and Suisun Marsh for native and recreationally and commercially important fish species, and they can use the boat locks to move between Montezuma Slough and the Sacramento River. Statistical relationships between indices of abundance and Delta

outflow or X2 tend to occur during the early life stages (i.e., winter/spring; e.g., Kimmerer 2002) and therefore would not overlap with the timing of the Proposed Alternative Action's changes to Delta outflow and X2.

Impacts to Other Listed, Candidate, Native, and Recreationally or Commercially Important Fish Species

Because the Proposed Alternative Action would have limited effects on habitat availability and movement of other listed, candidate, native, and recreationally or commercially important fish species, impacts associated with this proposed change would be **less than significant**.

2.2.2.9 Analysis of Effects to Special Status Plant Species

Special status plant species with the potential to occur in the Suisun Marsh could potentially be affected by reductions in salinity resulting from the Proposed Alternative Action, compared to the modeled baseline conditions, as modeled at Belden's Landing. Salinity would be lower than baseline conditions for two-to-three weeks during September and the first two weeks in October (Figure 2-3). Salinity reductions of approximately 2 psu occur under the Proposed Alternative Action from the onset of SMSCG operations through the end of September at which time SMSCG operations cease and salinity increases but remains below baseline conditions through mid-October when it increases above baseline conditions. This five-week period when salinity would be below baseline conditions could impact special status brackish marsh obligate species growth, survival, seed dispersal and germination success. However, because the duration of the reduction in salinity is temporary and relatively short, these potential impacts to the long-term persistence and growth of these populations would be limited.

Impacts to Special Status Plant Species

Because the Proposed Alternative Action would have temporary effects on salinity, impacts to special status plant species growth, survival, seed germination and dispersal success associated with this proposed change would be **less than significant**.

All other provisions of the ITP would remain in effect. No changes to SWP facilities or other operations are proposed and, thus, would have no impact on these species.

2.2.3 Cumulative Impacts

As described in the 2020 FEIR, the incremental contribution of the Long-Term Operation of the SWP to the cumulative impact on aquatic and terrestrial biological resources would not be cumulatively considerable because the proposed SWP operations are subject to the same regulatory framework promulgated by the federal and state resource agencies, and include environmental commitments, conservation, or protective measures specifically intended to offset, reduce, or otherwise limit potential impacts on aquatic species. Because modification of ITP Conditions 9.1.3 and 9.1.3.1 would not result in additional impacts to Delta Smelt or other aquatic species, the Long-Term Operation of the SWP would not result in cumulatively considerable impacts.

2.2.3.1 Conditions 9.1.3 and 9.1.3.1

As described in Section 2.2.2, above, the proposed change to Conditions 9.1.3 and 9.1.3.1 would change the *Summer-Fall Action* is intended to benefit Delta Smelt in September and will have minimal impacts on Delta Smelt in October and other fish species generally. For fish species evaluated in the 2020 FEIR, the level of impacts would be similar to those described in the 2020 FEIR. The proposed change to Conditions 9.1.3 and 9.1.3.1 does not require revisions to the conclusions or findings presented in the 2020 FEIR because no new or substantially more intense or severe significant environmental impacts, or potentially significant environmental impacts would occur.

Because the proposed change to Conditions 9.1.3 and 9.1.3.1 would result in similar impacts to those described in the 2020 FEIR, and all other requirements and/or conditions of the ITP would remain the same, there would be no considerable change in cumulative impacts as described in the 2020 FEIR.

2.3 Conclusions

As described in this Addendum, the proposed change to Conditions 9.1.3 and 9.1.3.1 of the 2020 ITP does not require revisions to the conclusions or findings presented in the 2020 FEIR because no new or substantially more intense or severe significant environmental impacts, or potentially significant environmental impacts would occur.

Based on the discussion presented in Section 2.2, Environmental Analysis, the Proposed Alternative Action (i.e., changes to Conditions 9.1.3 and 9.1.3.1 of the ITP) would not result in any of the conditions described in Sections 15162 and 15163 of the State CEQA Guidelines that call for preparation of a subsequent EIR or supplemental EIR.

In summary, the proposed modification to Condition 9.1.3, *Delta Smelt Summer-Fall Habitat Action* and Conditions 9.1.3.1, *Summer-Fall Action Plan*, of the ITP would not result in any of the following:

- new significant or potentially significant environmental effects,
- substantially increase the intensity or severity of previously identified significant effects,
- mitigation measures or alternatives previously found to be infeasible becoming feasible, or
- the availability/implementation of mitigation measures or alternatives that are considerably different from those analyzed in the 2020 FEIR that would substantially reduce one or more significant or potentially significant effects on the physical environment.

These conclusions confirm that a subsequent or supplemental EIR is not warranted, and this Addendum to the 2020 FEIR is the appropriate CEQA document pursuant to State CEQA Guidelines Section 15164 to evaluate and document the changes and additions to the long-term operation of the SWP facilities in the Delta. No changes are needed to the certified 2020 FEIR for the Long-Term Operations of the SWP.

Chapter 3
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