LONG-TERM OPERATION OF THE CALIFORNIA STATE WATER PROJECT

Addendum to the Final Environmental Impact Report

Prepared for:
California Department of Water Resources

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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) (CDFW 2020, Permit No. 2081-2019-066-00). The ITP provides incidental take coverage for the effects of State Water Project (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**). DWR requests to modify Conditions *7.7, Barker Slough Pumping Plant Sediment and Aquatic Weed Removal,* and *8.5.2, Larval and Juvenile Delta Smelt Protection* of the ITP.

Condition 7.7, *Barker Slough Pumping Plant Sediment and Aquatic Weed Removal,* requires DWR to coordinate with California Department of Fish and Wildlife (CDFW) at least seven days prior to initiating the aquatic weed or sediment removal. The condition requires DWR to provide a written description of the planned aquatic weed or sediment removal activities to CDFW, including a description of whether activities are planned outside the embayment and the floating booms as shown in Figure 1 in the ITP Project Description. The Condition also requires DWR to ensure that a Designated Biologist is onsite before, during, and after the planned activities to assess the potential for take of Delta Smelt or Longfin Smelt that would not otherwise occur as a result of project operations and permitted diversions at the Barker Slough Pumping Plant (BSPP). DWR has been complying with this condition since the issuance of the ITP and monitoring by the Designated Biologist has demonstrated that Delta Smelt and Longfin Smelt have never been documented as being present during sediment and aquatic weed removal activities. As a result, the DWR proposes to amend this condition to remove the requirement that the Designated Biologist always be present onsite during sediment and aquatic weed removal activities. In the place of this requirement, DWR proposes that the Designated Biologist be present only if Longfin Smelt or Delta Smelt have been detected at Station 716 (see **Figure 2**) through either the Smelt Larva Survey (SLS) or the 20mm Survey in the most recent sampling preceding the sediment and aquatic weed removal activities. All other aspects of this condition would remain.

Condition 8.5.2, *Larval and Juvenile Delta Smelt Protection,* requires DWR to maintain the seven-day average Old and Middle River (OMR) flows no more negative than -3,500 cubic feet per second (cfs) for seven consecutive days in response to the three-day cumulative expanded salvage of juvenile Delta Smelt at the SWP and Central Valley Project (CVP) exceeding 11 fish.

DWR proposes to amend this action to replace the three-day cumulative expanded salvage of juvenile Delta Smelt at the SWP and CVP exceeding 11 fish threshold with a turbidity trigger threshold that is representative of conditions that correlate with Delta Smelt presence in the south Delta.

As development of the U.S. Fish and Wildlife Service (USFWS) Delta Smelt Life Cycle Model with Entrainment (LCME) (Smith et al. 2020) has been completed and increasingly applied to predict the presence of larval and juvenile Delta Smelt in the south Delta based on relationships between OMR flow and Secchi depth (Smith 2020, Reclamation 2020), this proposed change will allow for abiotic parameter monitoring and an associated trigger threshold that would inform management of OMR flows that will be protective of Delta Smelt. All other provisions of the ITP, including other provisions of Condition 8.5.2, would remain in effect.

No changes to SWP facilities or other operations are proposed.

DWR has prepared this Addendum for the proposed change in compliance with the California Environmental Quality Act (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) (DWR 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 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 (Banks Pumping Plant), the Clifton Court Forebay (CCF), the Skinner Fish Facility, and the BSPP. 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.

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 for the FEIR prepared to support the ITP was filed with the State Clearinghouse on March 30, 2020. The 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 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 (WOMT) or required by CDFW. Refined Alternative 2b also includes adaptive management actions such as convening an Adaptive Management Team (AMT) that will develop and implement an Adaptive Management Program (AMP).

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 the Refined Alternative 2b include the shifting of spring maintenance flows to develop up to 150 Thousand Acre-Feet (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; however, the requested minor amendment to ITP No. 2081-2019-066-00 to revise conditions 7.7 and 8.5.2 is responsive to monitoring results during weed removal activities at BSPP and to developments in the LCME and its recent application, respectively. All other provisions of the ITP would remain in effect, and all operations would continue to comply with applicable laws, contractual obligations, and agreements. All provisions in the ITP and operation of the SWP will continue to protect the four species covered under the ITP after the proposed revisions to the ITP are accepted by CDFW and the ITP is amended.

1.3 Purpose of the EIR 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:

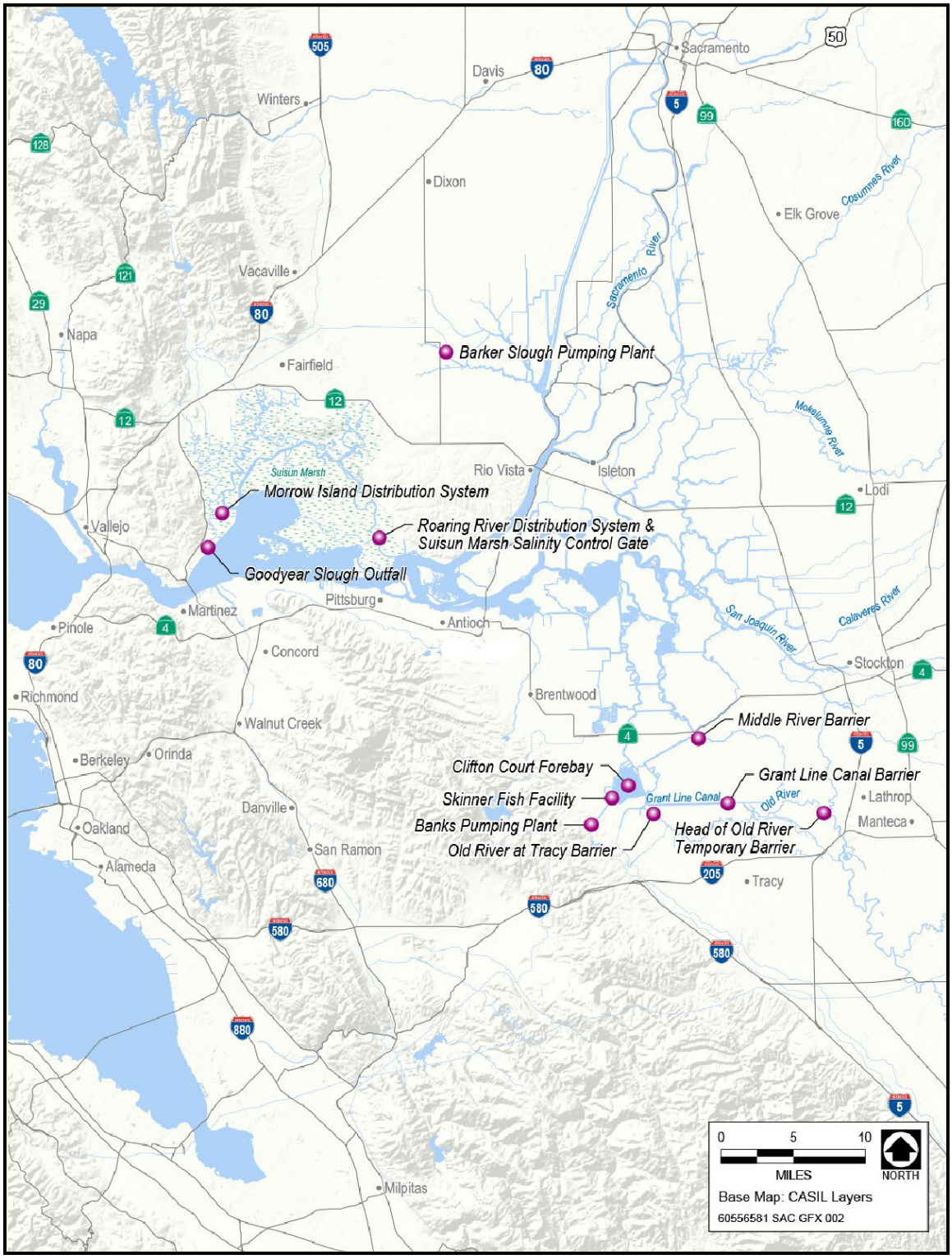
    a. The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

    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

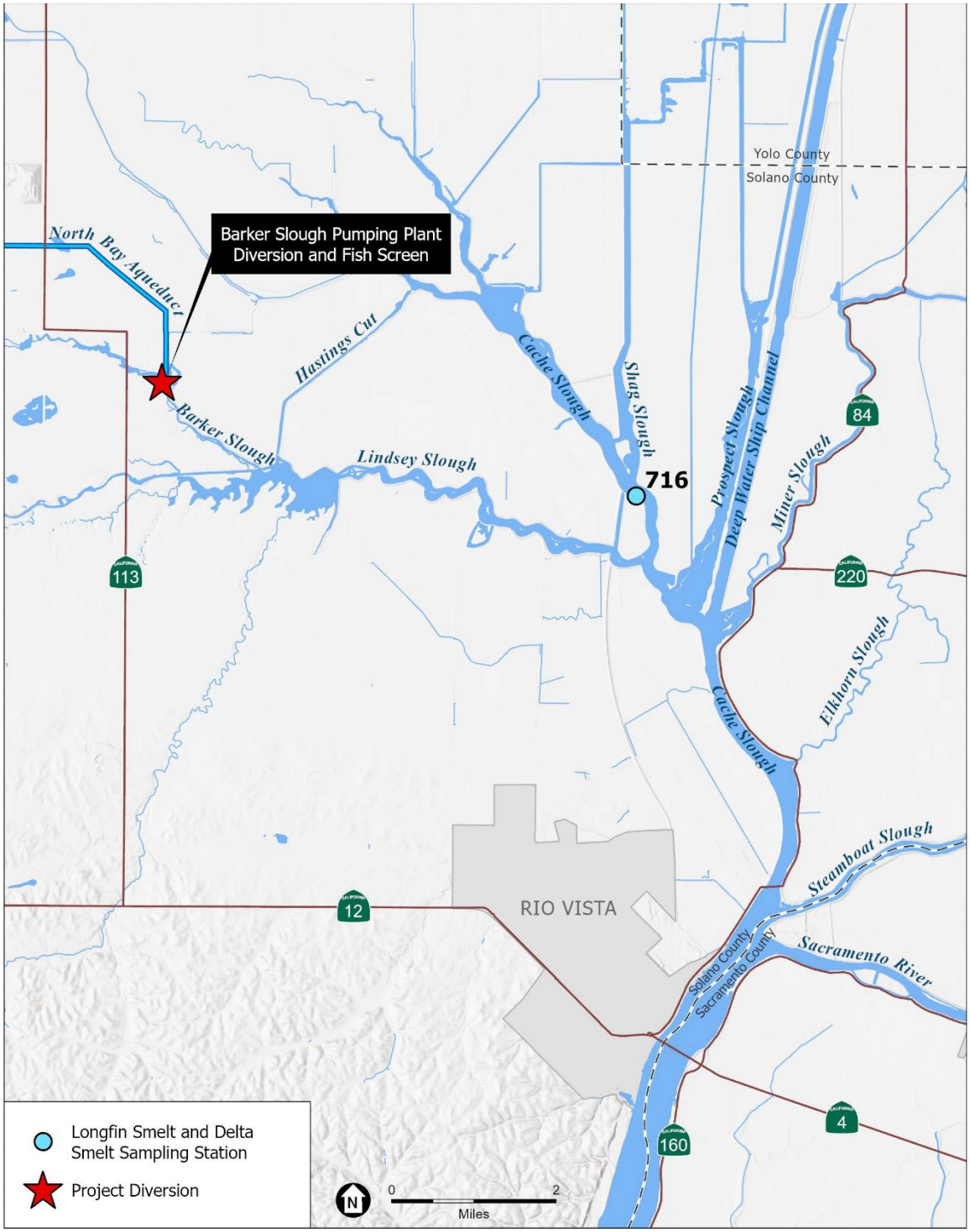
    d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

This Addendum concludes that the proposed change 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.



Source: DWR 2020

Figure 1
State Water Project Facilities Located in the Delta



Source: ESRI 2022, adapted by ESA

Figure 2
Barker Slough Pump Plant and Survey Station 716

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 analyses presented in the 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 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. 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 the monitoring requirement in ITP Condition 7.7 so that the Designated Biologist need be present only if Longfin Smelt or Delta Smelt have been detected at Survey Station 716 in the most recent sampling preceding the sediment and aquatic weed removal activities, and to modify ITP Condition 8.5.2 so that a turbidity trigger threshold that is representative of conditions that correlate with Delta Smelt presence is used to manage OMR flows. These proposed changes would not modify the long-term operations or substantively modify the actions evaluated in the 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
- 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 Condition 7.7

Currently, Condition 7.7 requires DWR to coordinate with CDFW at least seven days prior to initiating the aquatic weed or sediment removal. The Condition requires DWR to provide a written description of the planned aquatic weed or sediment removal activities to CDFW, including a description of whether activities are planned outside the embayment and the floating booms as shown in Figure 1 in the ITP Project Description. The Condition also requires DWR to ensure that a Designated Biologist is onsite before, during, and after the planned activities to assess the potential for take of Delta Smelt or Longfin Smelt that would not otherwise occur as a result of project operations and permitted diversions at the BSPP.

DWR has been complying with this condition since the issuance of the ITP and monitoring by the Designated Biologist has demonstrated that Delta Smelt and Longfin Smelt have never been documented as being present during sediment and aquatic weed removal activities. Additionally, other studies, including the DWR fish screen evaluation and entrainment monitoring studies (DWR 2015, 2017, 2019), further corroborate smelt presence being extremely rare in the vicinity of BSPP (a single smelt was captured between 2014-2016 monitoring period) and also demonstrated that the screen performance meets protective criteria. Lastly, environmental DNA (eDNA) monitoring detected no smelt DNA in the intake water sampled from aquatic weeds removed from the fish screens at BSPP between April through June 2021 (Cramer Fish Sciences/GENIDAQS 2021).

DWR's proposed change to modify Condition 7.7 would remove the requirement that the Designated Biologist always be present onsite during sediment and aquatic weed removal activities. In the place of this requirement, DWR proposes that the Designated Biologist be present only if Longfin Smelt or Delta Smelt has been detected at Station 716 through either the Smelt Larva Survey (SLS) or the 20mm Survey in the most recent sampling preceding the sediment and aquatic weed removal activities. All other aspects of this condition would remain.

Because monitoring by the Designated Biologist has demonstrated that Delta Smelt and Longfin Smelt have never been documented as being present during aquatic weed removal activities, the requested amendment to make the monitoring requirement conditional on Longfin Smelt or Delta Smelt presence at Station 716 would not reduce protections for these species. For the purposes of this minor amendment, DWR proposes to align Condition 7.7 with Condition 8.12, which uses species presence at Station 716 as a reliable indicator of species presence to determine the entrainment risk for BSPP export operations. Additionally, Station 716 is the closest sampling location to BSPP that is sampled by both SLS and 20mm Survey, allowing for the same metric for species presence to be used throughout the entire period of potential presence for both Longfin Smelt and Delta Smelt.

Condition 7.7, if amended, would remain as protective of Delta Smelt and Longfin Smelt. Therefore, impacts associated with this proposed change would be less than significant and there would be no reasonably foreseeable change in impacts as described in the 2020 FEIR. Further, the requested amendment does not amend any criteria for other species under the existing state and federal authorizations (i.e., Winter-run Chinook Salmon, Spring-run Chinook Salmon, Central Valley steelhead, and Green Sturgeon); therefore, the requested amendment would have a less than significant impact on these species.

2.2.3 Analysis of the Request to Modify Condition 8.5.2

DWR's proposed change would modify the requirement to maintain the seven-day average OMR flows no more negative than -3,500 cfs for seven consecutive days in response to the three-day cumulative expanded salvage of juvenile Delta Smelt at the SWP and CVP exceeding 11 Delta Smelt. In place of this action, DWR proposes to replace the three-day cumulative expanded salvage of juvenile Delta Smelt at the SWP and CVP exceeding 11 fish threshold with a turbidity trigger threshold that is representative of conditions that correlate with Delta Smelt presence to inform management of OMR flows.

In a memo to U.S. Bureau of Reclamation, USFWS (Smith 2020) articulates the use of Secchi depth data from fish monitoring programs as a surrogate for larval and juvenile Delta Smelt presence. A Secchi depth metric was identified using the USFWS LCME as a tool to predict the probability, or risk, that proportional entrainment mortality of Delta Smelt exceeds certain reference points, over a range of Old and Middle River flow and south Delta Secchi depth, and would provide for an OMR management trigger that is protective of larval and juvenile Delta Smelt.

Because the requested amendment would account for conditions (i.e., turbidity) that correlate to Delta Smelt presence to consider OMR flow requirements, Condition 8.5.2, if amended, would remain as protective of Delta Smelt. Therefore, impacts associated with this proposed change would be less than significant. Further, the requested amendment does not amend any criteria for other species under the existing state and federal authorizations (i.e., Winter-run Chinook Salmon, Spring-run Chinook Salmon, Central Valley steelhead, Green Sturgeon, and Longfin Smelt); therefore, the requested amendment would have a less than significant impact on these species.

All other provisions of the ITP, including other provisions of Condition 8.5.2, would remain in effect. No changes to SWP facilities or other operations are proposed.

2.2.4 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 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, and therefore the Long-Term Operation of the SWP would essentially "self-mitigate" for its proportional share of its contribution to the cumulative impact.

Condition 7.7

As described in this addendum above, monitoring at BSPP by the Designated Biologist has demonstrated that Delta Smelt and Longfin Smelt have never been documented as being present during sediment and aquatic weed removal activities. As a result, the requested change to modify the monitoring requirement would not reduce protections for these species and there would be no reasonably foreseeable change in impacts as described in the 2020 FEIR. Condition 7.7, if amended, would remain as protective of Delta Smelt and Longfin Smelt. Therefore, impacts associated with this proposed change would be less than significant.

Because the proposed change to Condition 7.7 would not change protections for Delta Smelt or Longfin Smelt, 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.

Condition 8.5.2

As described in this addendum above, the proposed change to Condition 8.5.2 would allow for turbidity monitoring and an associated trigger threshold that would result in management of OMR

flows that will be protective of Delta Smelt and maintain the level of impacts to that analyzed in the 2020 FEIR. As described in this Addendum, the proposed changes 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.

Because the proposed change to Condition 8.5.2 would allow for turbidity monitoring and an associated trigger threshold that would result in management of OMR flows that will be protective of Delta Smelt, 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 changes to conditions 7.7 and 8.5.2 of 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.

Based on the discussion presented in Section 2.3, Environmental Analysis, the proposed changes to conditions 7.7 and 8.5.2 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 removal modifications to Conditions 7.7, *Barker Slough Pumping Plant Sediment and Aquatic Weed Removal*, and 8.5.2, *Larval and Juvenile Delta Smelt Protection*, 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.

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CHAPTER 3
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