

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
ECOSYSTEM CONSERVATION DIVISION
P.O. BOX 944209
SACRAMENTO, CA, 94244-2090



AMENDMENT NO. 9
(A Major Amendment)
California Endangered Species Act
Incidental Take Permit No. 2081-2019-066-00
California Department of Water Resources
Long-Term Operation of the State Water Project in the Sacramento-San Joaquin Delta

INTRODUCTION

On March 31, 2020, the California Department of Fish and Wildlife (CDFW) issued Incidental Take Permit No. 2081-2019-066-00 (ITP) to California Department of Water Resources (Permittee), authorizing take of Longfin Smelt (LFS, *Spirinchus thaleichthys*), Delta Smelt (DS, *Hypomesus transpacificus*), spring-run Chinook salmon (CHNSR, *Oncorhynchus tshawytscha*), and winter-run Chinook salmon (CHNWR, *Oncorhynchus tshawytscha*) (collectively, the Covered Species) associated with and incidental to the long-term operations of the State Water Project (SWP) in the Sacramento San Joaquin Delta (Project).

The Project as described in the ITP as originally issued by CDFW includes continued operation of the SWP facilities in the Sacramento-San Joaquin Delta (Delta) and Suisun Marsh. The SWP includes water, power, and conveyance systems, conveying an annual average of 2.9 million acre-feet of water. The principal components of the Project are operations of the Harvey O. Banks Pumping Plant (Banks Pumping Plant), the Clifton Court Forebay, the John E. Skinner Delta Fish Protective Facility, the Barker Slough Pumping Plant, the South Delta Temporary Barriers, San Luis Reservoir, the Delta Mendota Canal/California Aqueduct Intertie, the Georgiana Slough Migratory Barrier, and Suisun Marsh facilities including the Suisun Marsh Salinity Control Gates, Roaring River Distribution System, Morrow Island Distribution System, and Goodyear Slough Outfall. Permittee holds contracts with 29 public agencies in northern, central, and southern California for water supplies from the SWP. Water stored in the Oroville facilities, along with water available in the Delta (consistent with applicable regulations) is captured in the Delta and conveyed through several facilities to SWP contractors. The SWP is operated to provide flood control and water for agricultural, municipal, industrial, recreational, and environmental purposes. In issuing the ITP, CDFW found, among other things, that Permittee's compliance with the Conditions of Approval of the ITP would fully mitigate Project impacts of the taking on the Covered Species and that issuance of the ITP would not jeopardize the continued existence of the Covered Species.

The Project includes technical teams that meet on a weekly basis for a portion of each year to assess the risk of entrainment of Covered Species in the south Delta, including the Smelt and Salmon Monitoring Teams, and to ensure that minimization measures that require reductions in exports at the Banks Pumping Plant are implemented.

In a letter dated September 30, 2020, Permittee requested changes to Conditions of Approval 8.1.1, 8.1.4, 8.3.1, 8.5.1, 9.1.3, and 9.2.1. Specifically, Permittee requested to change the start date for the Smelt Monitoring Team in Condition of Approval 8.1.1 and 8.1.4 to begin no later than November 1 each year to ensure consistency throughout the ITP. Permittee also asked to change the units used to report turbidity in Conditions of Approval 8.3.1, 8.5.1, and 9.1.3 from Nephelometric Turbidity Units (NTU) to Formazin Turbidity Units (FNU). Finally, Permittee requested an extension in the deadline for the first funding milestone required in Condition of Approval 9.2.1 to April 1, 2021, and clarifications to the requirements of that condition for funding restoration actions in the Sacramento River. These clarifications allow individual projects that receive funding to benefit either CHNWR or CHNSR, or both species, and allow Permittee to fund larger projects that extend over multiple years. On October 16, 2021, CDFW issued minor amendment 2081-2019-066-00-A1, including the requested changes to Conditions of Approval 8.1.1, 8.1.4, 8.3.1, 8.5.1, 9.1.3, and 9.2.1.

In a letter dated May 18, 2021, Permittee requested changes to Section 2.2 of the Project Description. Specifically, Permittee requested to change the description of Project operations for the June 1 – August 15, 2021 time period to incorporate modifications to Water Rights Decision 1641 (D-1641) included in the 2021 Temporary Urgency Change Petition Regarding Delta Water Quality (WY 2021 TUCP) submitted to the State Water Resources Control Board (SWRCB) by Permittee and the U.S. Bureau and Reclamation (Reclamation) on May 17, 2021, as subsequently approved by the SWRCB on June 1, 2021. Changes to D-1641 approved by the SWRCB included modifications to Delta outflow and salinity standards between June 1 and August 15, 2021, requirements to reduce SWP and Central Valley Project (CVP) exports from June 1 – August 15, 2021, and requirements to conduct new data analyses and synthesis to better understand impacts of critically dry years on fish species in the Delta. On June 2, 2021, CDFW issued minor amendment 2081-2019-066-00-A2, including changes to Section 2.2 of the Project Description reflective of the WY 2021 TUCP approval by the SWRCB.

In a letter dated March 18, 2022, Permittee requested changes to Condition of Approval 8.12 (Barker Slough Pumping Plant Longfin and Delta Smelt Protection). Specifically, Permittee requested the ability to meet and confer with CDFW regarding required export restrictions at the Barker Slough Pumping Plant (BSPP) if a larval DS were detected at Station 716 from April 1 – June 30, 2022. This request was made as a result of the ongoing drought, to implement the directive to the Permittee in an October 19, 2021,

Emergency Proclamation, to proactively prevent situations where a community runs out of drinking water by assisting local agencies with identifying acute drinking water shortages in domestic water supplies and working with local agencies in implementing solutions to those water shortages. The orders and provisions of the October 2021 proclamation were maintained in full force and effect by a subsequent Executive Order issued on March 28, 2022, by the Governor. Permittee requested the ability to establish a maximum diversion rate at the BSPP based on diversion rates needed to provide minimum health and safety deliveries to customers of the North Bay Aqueduct and proactively ensure that no community within the North Bay Aqueduct service area runs out of drinking water. On April 1, 2022, CDFW issued minor amendment 2081-2019-066-00-A3, modifying Conditions of Approval 8.12 and 9.1.1 in response to this request.

Also in its March 18, 2022 letter, Permittee requested to change the description of Project operations for the April – June, 2022 time period to incorporate modifications to D-1641 included in the Water Year (WY) 2022 TUCP submitted to the SWRCB by Permittee and Reclamation on March 18, 2022, as approved by the SWRCB on April 4, 2022. Changes to D-1641 approved by the SWRCB include: 1) modifications to Delta outflow and salinity standards between April 4 – June 30, 2022; 2) requirements to reduce SWP and Central Valley Project (CVP) exports from April 4 – June 30, 2022 when not meeting D-1641 standards; 3) requirements to evaluate the feasibility of dedicating a portion of the water conserved as a result of the WY 2022 TUCP to provide pulse flows or other flow enhancements above and beyond D-1641 requirements; 4) requirements to conduct modeling, monitoring analysis and reporting to inform drought-related operational decisions and planning; and 5) requirements to conduct monitoring and reporting to facilitate improved understanding of operations during the April – June, 2022 time frame and associated impacts. On April 5, 2022, CDFW issued minor amendment 2081-2019-066-00-A4, adding section 2.2.2 to the Project Description in response to this request.

In a letter dated July 22, 2022, Permittee requested changes to Conditions of Approval 7.7 and 8.5.2. Specifically, Permittee requested to change the requirement for Designated Biologists in Condition of Approval 7.7. The requested change would require a Designated Biologist to be present during weed removal activities at BSPP only when LFS or DS are detected at station 716 in the most recent Smelt Larva Survey or 20mm Survey. Permittee also asked to replace the detection of more than 11 juvenile DS in expanded salvage as an indicator of entrainment risk triggering certain requirements of Condition of Approval 8.5.2 with a south Delta habitat-based trigger. Specifically, the Permittee requested to use a turbidity threshold that is representative of conditions that correlate with larval and juvenile DS presence in the south Delta. On August 30, 2022, CDFW issued minor amendment 2081-2019-066-00-A5, modifying Conditions of Approval 7.7 and 8.5.2 in response to this request.

In a letter dated January 18, 2023, Permittee requested changes to Condition of Approval 8.6.3. Specifically, Permittee requested to change the requirement to use length at date methods to identify natural origin older juvenile Chinook salmon to allow for the use of genetic analyses, in 2023. The requested change would allow Permittee to use CDFW-approved genetic analyses to identify all older juvenile Chinook salmon observed in salvage at the SWP and CVP. Specifically, the Permittee requested to only count genetically confirmed CHNWR toward the daily loss thresholds identified in Condition of Approval 8.6.3. On January 20, 2023, CDFW issued minor amendment 2081-2019-066-00-A6, modifying Condition of Approval 8.6.3 during water year 2023 in response to this request.

In a letter dated February 15, 2023, Permittee requested to change the description of D-1641 requirements in February and March 2023 to incorporate modifications included in the Water Year (WY) 2023 TUCP that Permittee and Reclamation submitted to the SWRCB on February 13, 2023. The WY 2023 TUCP requests the SWRCB to remove a requirement to maintain X2 at Port Chicago during February and March 2023 when specific basin-wide hydrologic and Port Chicago electrical conductivity conditions otherwise would require X2 to be maintained at Port Chicago. On February 21, 2023, the SWRCB issued an order conditionally approving the WY 2023 TUCP. Changes to D-1641 approved by the SWRCB include: 1) modifications to Delta outflow and salinity standards from February 21, 2023 through March 2023; 2) requirements to conduct monitoring and reporting to facilitate improved understanding of the effects of the approved change on native resident and migratory species, including potential changes in entrainment of native fish species in the SWP and CVP export facilities; and 3) requirements to identify opportunities to use a portion of the water supplies resulting from the WY 2023 TUCP to improve water supplies for wildlife refuges and to provide for pulse flows for the benefit of native fish and wildlife. On February 23, 2023, CDFW issued minor amendment 2081-2019-066-00-A7, adding Section 2.2.3, Temporary Urgency Change Petition, February, and March 2023, to the Project Description and Condition of Approval 9.2.3, Mitigation for Impacts Associated with WY 2023 TUCP, in response to this request.

In a letter dated December 11, 2023, Permittee requested changes to Condition of Approval 8.6.3. The requested changes are to use CDFW-approved genetic analyses to identify all older juvenile Chinook salmon observed in salvage at the SWP and CVP. Specifically, the request specifies that the Permittee shall restrict exports as required by Condition of Approval 8.6.3 in response to the initial length-at-date identification of natural older juvenile Chinook salmon and the thresholds. If genetic analysis of an individual natural older juvenile Chinook salmon observed in salvage at the SWP or CVP indicates that it is not CHNWR, that individual shall not count toward the daily loss threshold, and continued export restrictions under Condition of Approval 8.6.3 are not required if the daily loss threshold has consequently not been met. All genetic analyses

shall be conducted using CDFW-approved genetic methods. On December 22, 2023, CDFW issued Minor Amendment No. 8, modifying Condition of Approval 8.6.3, in response to this request, and updated related CHNWR daily loss thresholds to be consistent with historical loss of genetically identified CHNWR.

In issuing the ITP and Minor Amendments Nos. 1 through 8 (collectively “the ITP, as amended”), CDFW found, among other things, that the Permittee’s compliance with the Conditions of Approval of the ITP, as amended, would fully mitigate impacts to the Covered Species and would not jeopardize the continued existence of the Covered Species.

In a letter dated June 14, 2024, the Permittee requested changes to the Covered Species subject to the take authorization provided by the ITP, to add White Sturgeon (*Acipenser transmontanus*), which the Fish and Game Commission voted to designate as a candidate species at its June 19, 2024 meeting, as an additional Covered Species.

This Major Amendment No. 9 (Amendment No. 9) makes the following changes to the existing ITP:

1. Amendment No. 9 revises the Effective Date and Expiration Date of this ITP.
2. Amendment No. 9 adds White Sturgeon (*Acipenser transmontanus*) as a Covered Species.
3. Amendment No. 9 revises the Impacts of the Taking on Covered Species to include White Sturgeon.
4. Amendment No. 9 adds Condition of Approval 7.9 (White Sturgeon Monitoring and Science Requirements) to Section 7, Monitoring, Notification and Reporting Provisions.
5. Amendment No. 9 revises Condition of Approval 8.1 (Real-time Operations, Monitoring, and Technical Teams) by adding Condition of Approval 8.1.6 (White Sturgeon Monitoring Team).
6. Amendment No. 9 revises COA 8.10 (SWP Proportional Share) to include Condition of Approval 8.22.
7. Amendment No. 9 revises Condition of Approval 8.14 (Clifton Court Forebay Aquatic Weed Control Practices) by adding White Sturgeon in the Covered Species to be monitored.

- 8. Amendment No. 9 adds Condition of Approval 8.22 (White Sturgeon Entrainment Protections).
- 9. Amendment No. 9 revises Condition of Approval 9.2.2 (Implement the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project) to include consideration of White Sturgeon.
- 10. Amendment No. 9 adds Condition of Approval 9.6 (White Sturgeon Habitat Restoration Project Scoping).
- 11. Amendment No. 9 revises Condition of Approval 10.1 (Security Amount) to add costs associated with White Sturgeon Conditions of Approval.

AMENDMENT

The ITP is amended as follows (amended language in ***bold italics***; deleted language in ~~strikethrough~~):

- 1. The first paragraph of the Effective Date and Expiration Date of this ITP shall be revised to read:

This ITP shall be executed in duplicate original form and shall become effective once a duplicate original is acknowledged by signature of the Permittee on the last page of this ITP and returned to CDFW’s Habitat Conservation Planning Branch at the address listed in the Notices section of this ITP. Unless renewed by CDFW, this ITP’s authorization to take ~~the Covered Species~~ ***Longfin smelt, Delta smelt, spring-run Chinook salmon and winter-run Chinook salmon*** shall expire on ***March 31, 2030. This ITP’s authorization to take White Sturgeon is effective as of the date CDFW executes Major Amendment No. 9 and unless renewed by CDFW the ITP’s authorization to take White Sturgeon shall expire on December 15, 2024.***

- 2. The Covered Species Subject to Take Authorization Provided by this ITP shall be revised to read:

This ITP covers the following species:

Name

CESA Status

Longfin smelt (<i>Spirinchus thaleichthys</i>)	Threatened ¹³
Delta smelt (<i>Hyomesus transpacificus</i>)	Endangered ¹⁴
Spring-run Chinook salmon ESU (<i>Oncorhynchus tshawytscha</i>)	Threatened ¹⁵
Winter-run Chinook salmon ESU (<i>Oncorhynchus tshawytscha</i>)	Endangered ¹⁶
White Sturgeon (<i>Acipenser transmontanus</i>) (Covered until December 15, 2024)	Candidate¹⁷

3. Impacts of the Taking on Covered Species shall be amended to add:

White Sturgeon (*Acipenser transmontanus*)

The Project activities and their impacts are expected to result in the incidental take of White Sturgeon. The Covered Activities that are expected to result in incidental take of White Sturgeon include operations of the: South Delta Export Facilities, Skinner Fish Facility, CCF, South Delta Temporary Barriers, Georgiana Slough Migratory Barrier, BSPP, and Suisun Marsh Facilities that include the SMSCG, the RRDS, the MIDS, and GYSO.

South Delta Export facilities, Skinner Fish Facility, and CCF – Incidental take of White Sturgeon in the form of mortality (“kill”) may occur as a result of operations of the South Delta Export facilities, entrainment into CCF, CCF Aquatic Weed Control Program, and predator control in CCF. Mechanical removal of aquatic weeds in CCF has the potential to result in take through direct physical injury. The CCF Aquatic Weed Control Program uses copper-based herbicides in CCF, which would result in injury and mortality of White Sturgeon. Operations of the South Delta Export Facilities may result in take of larvae, juvenile, and subadult White Sturgeon. After being entrained into the export facilities, take may occur as a result of fish bypassing salvage operations through the louvered (behavioral) fish screens to the export pumps, and losses during the fish salvage process. South Delta export-related reverse flows in Old and Middle rivers may pull White Sturgeon larvae and juveniles into the interior

¹³ See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(2)(E).

¹⁴ See Cal. Code Regs. tit. 14 § 670.5, subd. (a)(2)(O).

¹⁵ See Cal. Code Regs. tit. 14 § 670.5, subd. (b)(2)(C).

¹⁶ See Cal. Code Regs. tit. 14 § 670.5, subd. (a)(2)(M).

¹⁷ ***The species status may change following the decision of the Fish and Game Commission to designate the species as threatened or endangered but if there is such a designation, the species will remain a Covered Species.***

Delta where they are subjected to higher exposure to entrainment risk at the South Delta Export Facilities and larvae are likely too small to screen efficiently at the Skinner Fish Facility, thus more likely to be transported to the export pumps and are vulnerable to pre-screen mortality. Larval and juvenile White Sturgeon produced by adults that spawn in the San Joaquin River are particularly susceptible to take at the South Delta Export facilities, even at low levels of operation. Incidental take of White Sturgeon individuals may also occur from the Covered Activities in the form of pursue, catch, capture, or attempt to do so during the fish salvage process. The areas where authorized take of White Sturgeon is expected to occur include: the South Delta Export Facilities, Skinner Fish Facility, and CCF located about 12.9 km northwest of Tracy.

Impacts of the authorized taking also include adverse impacts to White Sturgeon individuals related to the Project's incremental contribution to cumulative impacts (indirect effects). These impacts include vulnerability of larvae and juveniles to predation within CCF, entrainment of larval, juvenile, and subadult White Sturgeon into unfavorable habitats through reverse flows in Old and Middle rivers as a result of south Delta export operations, impaired feeding opportunities, entrainment of food web resources, and reduction in habitat quantity and quality for rearing fish. Project operations of the south Delta export facilities will cause hydrodynamic effects that will result in impacts to all life stages of White Sturgeon. Operations of south Delta facilities will also increase transport into the central Delta.

Additionally, reduction in Delta outflow resulting from Project operation of south Delta facilities, particularly in wetter years and those immediately succeeding wetter years, will reduce the frequency of conditions required for White Sturgeon to have successful spawning, juvenile recruitment, and subsequent larval rearing.

South Delta Temporary Barriers – Incidental take of White Sturgeon in the form of mortality (“kill”) may occur as a result of operations of the South Delta Temporary Barriers. South Delta Temporary Barriers installation will alter hydraulics in Old and Middle rivers, resulting in short term increases in OMR reverse flows. Increases in OMR reverse flows in turn may increase the entrainment of larval and juvenile White Sturgeon into the South Delta Export Facilities. Authorized take of White Sturgeon is expected to occur upstream of the divergence at the Grant Line Canal Barrier and the Tracy Barrier on Old River and the Middle River Barrier on Middle River.

Impacts of the authorized taking also include adverse impacts to White Sturgeon individuals related to the Project's incremental contribution to cumulative impacts (indirect effects). These impacts include increased vulnerability to predation through creation of enhanced predatory fish habitat adjacent to the South Delta Temporary Barriers.

Georgiana Slough Migratory Barrier – Impacts of the authorized taking of White Sturgeon are related to the Project's incremental contribution to cumulative impacts (indirect impacts). Operation of the Georgiana Slough Migratory Barrier will result in increased vulnerability to predation through creation of enhanced predatory fish habitat adjacent to the barrier.

Barker Slough Pumping Plant - Incidental take of White Sturgeon in the form of mortality ("kill") may occur as a result of operations of the BSPP by means of entrainment, impingement, and screen contact. Authorized take of White Sturgeon is expected to occur approximately 16 km from the mainstem Sacramento River at the end of Barker Slough.

Impacts of the authorized taking also include adverse impacts to White Sturgeon individuals related to the Project's incremental contribution to cumulative impacts (indirect effects). These impacts include non-lethal screen contact, increased vulnerability to predation, and food web impacts.

Suisun Marsh Facilities - Incidental take of White Sturgeon in the form of mortality ("kill") may occur as a result of operations of RRDS, MIDS, SMSCG, and GYSO by means of entrainment, impingement, and screen contact. The areas where authorized take of White Sturgeon is expected to occur include Montezuma Slough about three km downstream from the confluence of the Sacramento and San Joaquin rivers, the confluence of Roaring River and Montezuma Slough, and Goodyear Slough south of Pierce Harbor.

Impacts of the authorized taking also include adverse impacts to White Sturgeon individuals related to the Project's incremental contribution to cumulative impacts (indirect effects). These impacts include non-lethal screen contact and increased vulnerability to predation.

4. Section 7, Monitoring, Notification and Reporting Provisions, shall be amended to add:

7.9 White Sturgeon Monitoring and Science Requirements

7.9.1 White Sturgeon Science Program. Permittee shall convene a meeting

of the White Sturgeon Science Program within 30 days of Amendment No. 9's execution. The White Sturgeon Science Program shall include experts from CDFW and DWR and allow for participation by other interested parties including USFWS, NMFS, Reclamation, and SWP contractors. A primary goal of this effort is to improve management of White Sturgeon and to identify potential management actions that could improve its status. Permittee shall prepare a draft White Sturgeon Science Plan (Plan), in collaboration with CDFW, that describes new science needed to improve the understanding of White Sturgeon ecology, stressors, and impacts as a result of SWP operations within one year of Amendment No. 9's execution. The Plan shall include, but not be limited to, the following science priorities:

- **A schedule for implementation including deadlines for draft and final reports for each study required.**
- **A plan for development of a mathematical life cycle model for White Sturgeon, verified with field data collection, as a quantitative tool to characterize the effects of abiotic and biotic factors on White Sturgeon abundance and distribution, including major mortality events due to harmful algal blooms.**
- **New and ongoing monitoring that:**
 - **Characterizes the distribution and abundance of adult, sub-adult, juvenile, and larval life stages across all life stages.**
 - **Collects necessary data to develop a future life cycle model including somatic growth as well as estimates of survival probabilities among life stages.**
 - **Characterizes changes in abundance and distribution of life stages across a range of hydrologic conditions, including varying ranges of X2 and water year types.**
 - **Considers revisions to existing IEP monitoring programs to expand the spatiotemporal distribution of sampling.**
 - **Addresses factors that influence catchability and gear efficiency.**
- **Improved understanding of spawning, egg development, and rearing habitat distribution and use in the spawning rivers, Delta, and Suisun Marsh.**
- **A salvage prediction tool for generating a near-term forecast of the probability of future salvage designed to inform real-time operations.**
- **To support life cycle model development, quantify the lethal and**

sublethal impacts of harmful algal blooms on White Sturgeon.

The Plan may include additional actions; for example, develop a genetic management plan to support the use of cultured fish for research purposes, improved understanding of the genetic diversity within California White Sturgeon, White Sturgeon-specific studies of fish screen efficiency and loss within CCF. Permittee shall work collaboratively with the White Sturgeon Science Program members and consider edits and comments on the draft White Sturgeon Science Plan while preparing the final Plan. The final Plan shall be submitted to CDFW within one year following submission of the draft Plan, for approval by CDFW. After the final Plan is approved in writing by CDFW, Permittee shall fund and implement required monitoring and science according to the timelines specified in the final Plan. At a minimum, Permittee shall convene the White Sturgeon Science Program quarterly every year following initiation of the final White Sturgeon Science Plan to:

- Review data obtained from new and ongoing monitoring programs.***
- Review methods used to implement monitoring and recommend adjustments as they deem appropriate.***
- Review draft results from new and ongoing science.***

Permittee shall make all raw data and modeling acquired as a part of the White Sturgeon Science Plan available to members of the White Sturgeon Science Program on a mutually agreeable timeline.

7.9.2 Larval White Sturgeon Entrainment Monitoring. Permittee shall implement larval White Sturgeon monitoring and salvage at the Skinner Fish Facility to identify the presence of larvae greater than 20 mm. Larval White Sturgeon monitoring and salvage data will be provided to CDFW according to existing methods of data transmission for all other species.

5. Section 8, Minimization Measures, Condition of Approval 8.1 (Real-time Operations, Monitoring, and Technical Teams), shall be revised to add:

8.1.6 White Sturgeon Monitoring Team. The purpose of the White Sturgeon Monitoring Team is to consider and discuss survey data, salvage data, and other pertinent biotic and abiotic factors described in Condition of Approval 8.22.1. The White Sturgeon Monitoring Team shall include representatives from CDFW and DWR.

Permittee shall make all raw data and modeling utilized as a part of the White Sturgeon Monitoring Team available to CDFW within ten days of a request.

6. The first two paragraphs of Section 8, Condition of Approval 8.10 (SWP Proportional Share), shall be amended to read as follows:

8.10 SWP Proportional Share. Due to the historically coordinated operations of the SWP and CVP, joint operational criteria related to OMR flows and export restrictions have been developed for SWP and CVP that assume coordinated implementation by Permittee and Reclamation. Conditions of Approval 8.3.1, 8.3.2, 8.3.3, 8.4.1, 8.4.2, 8.5.1, 8.5.2, 8.6.1, 8.6.2, 8.6.3, 8.6.4, 8.7, 8.8, 8.17 **and 8.22** set out such operational criteria that assume coordination by Permittee and Reclamation to meet the criteria and that are subject to the process set out in this condition. During the term of this ITP there may be instances when operational requirements stated in or determined by these Conditions of Approval are different from operational requirements of the applicable ESA authorizations, which govern operations at the CVP as well as the SWP. If an operational restriction required by this ITP, pursuant to one or more of the Conditions of Approval listed above, is more restrictive than the then controlling operations required by the applicable ESA authorizations, Permittee shall take the following steps to meet its proportional share of the operational criteria stated or determined by the Condition of Approval(s) at issue:

1) Permittee is legally bound, both statutorily and through agreements with the Bureau of Reclamation, not to utilize State facilities (including the CCF, Banks Pumping Plant, the California Aqueduct, and the SWP share of San Luis Reservoir) or allow third parties (including the CVP) to use State facilities in a manner that would result in a violation of law, including the operational criteria stated in or determined by Conditions of Approval 8.3.1, 8.3.2, 8.3.3, 8.4.1, 8.4.2, 8.5.1, 8.5.2, 8.6.1, 8.6.2, 8.6.3, 8.6.4, 8.7, 8.8, 8.17, **and 8.22** of this ITP.

7. The second paragraph of Section 8, Condition of Approval 8.14 (Clifton Court Forebay Aquatic Weed Control Practices), shall be amended to read as follows:

8.14 Clifton Court Forebay Aquatic Weed Control Practices. Permittee may apply Aquathol K and copper-based aquatic pesticides, as needed, from June 28 to August 31.

Permittee may apply Aquathol K and copper-based aquatic pesticides, if necessary, prior to June 28 or after August 31 if the average daily water

temperature within the CCF is greater than or equal to 25°C, and if DS, LFS, CHNWR, and CHNSR, **and White Sturgeon** are not at additional risk from the treatment, as confirmed by CDFW, NMFS and USFWS. Before applying aquatic pesticides outside of the June 28 to August 31 time frame, Permittee shall notify and confer with CDFW, NMFS and USFWS to determine whether ESA- or CESA-listed fish species are present and at risk from the proposed treatment.

8. Section 8, Minimization Measures, shall be amended to add:

8.22 White Sturgeon Real-Time Risk Assessment. Throughout the water year, Permittee shall convene the White Sturgeon Monitoring Team the following business day if observation of four or more White Sturgeon in salvage (raw count in salvage) at the SWP or CVP export facilities has occurred within a rolling 30-day period.

Upon convening, the White Sturgeon Monitoring Team shall review all available information to develop an assessment of the risk of further salvage of White Sturgeon including:

- ***Data from new and ongoing science and monitoring***
- ***Biological modeling and data analysis***
- ***Hydrologic data, SWP and CVP exports, and hydrologic model outputs***
- ***Available information to estimate residence time in CCF***

Within the White Sturgeon Monitoring Team, staff jointly develop the risk assessment and supporting documentation to accompany operations advice. DWR and CDFW White Sturgeon Monitoring Team staff may conclude different operations advice is warranted, in which case the difference shall be noted and elevated as described in this Condition of Approval. If a risk assessment conducted by the White Sturgeon Monitoring Team determines that an action is needed to minimize take of White Sturgeon, the White Sturgeon Monitoring Team shall provide its advice to WOMT (Condition of Approval 8.1.3), and operational decisions shall be made following the process described in the final paragraph of Condition of Approval 8.1.4 (Collaborative Approach to Real-time Risk Assessment). The White Sturgeon Monitoring Team will continue to convene as necessary throughout the year.

9. The Section 9, COA 9.2.2 shall be amended to read as follows:

9.2.2 Implement the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project. Within 6 years of the effective date of this ITP Permittee shall implement the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project (Salmonid Habitat and Fish Passage Project). The objective of the Salmonid Habitat and Fish Passage Project is to enhance floodplain rearing habitat and fish passage in the Yolo Bypass by implementing the Project as described in Alternative 1 of the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Final EIR/EIS¹⁸. This project will benefit CHNWR, CHNSR, Central Valley steelhead, ~~and the Southern DPS of North American green sturgeon,~~ **and White Sturgeon.** ~~To benefit CHNWR, CHNSR, Central Valley steelhead, and the Southern DPS of North American green sturgeon.~~

The first objective of the Salmonid Habitat and Fish Passage Project is to increase the availability of floodplain rearing habitat for juvenile CHNWR, CHNSR, and Central Valley steelhead. This action can also improve conditions for Sacramento splittail and Central Valley fall-run Chinook salmon. Specific biological goals include:

- Improve access to seasonal habitat through volitional entry.
- Increase access to and acreage of seasonal floodplain fisheries rearing habitat.
- Reduce stranding and presence of migration barriers.
- Increase aquatic primary and secondary biotic production to provide food through an ecosystem approach.

The second objective of the Salmonid Habitat and Fish Passage Project is to reduce migratory delays and loss of fish at Fremont Weir and other structures in the Yolo Bypass. Specific biological goals include:

- Improve connectivity within the Yolo Bypass for passage of salmonids, ~~and green sturgeon,~~ **and White Sturgeon.**
- Improve connectivity between the Sacramento River and the Yolo Bypass to provide safe and timely passage for:
 - Adult CHNWR between mid-November and May when water surface elevations in the Sacramento River are amenable to fish passage.

¹⁸ California Department of Water Resources and U.S. Bureau of Reclamation. 2019. Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project. Final Environmental Impact Statement/Environmental Impact Report. State Clearinghouse No. 2013032004. May 2019.

- Adult CHNSR between January and May when elevations in the Sacramento River are amenable to fish passage.
- Adult California Central Valley steelhead in the event their presence overlaps with the defined seasonal window for other target species when elevations in the Sacramento River are amenable to fish passage.
- Adult Southern DPS green sturgeon between February and May when elevations in the Sacramento River are amenable to fish passage.
- **Adult White Sturgeon between February and May when elevations in the Sacramento River are amenable to fish passage.**

Primary Project activities include the construction of a notch in Fremont Weir located in the Northern Yolo Bypass, including the construction of the following features:

- *Intake channel:* The intake channel shall connect the Sacramento River to the proposed headworks structure at the appropriate elevation to facilitate an upstream fish passage facility for adult fish and for passing rearing habitat flows and juvenile salmonids
- *Headworks structure:* The headworks structure shall bisect the existing Fremont Weir on the east side and would control the diversion of Project flow from the Sacramento River into the Yolo Bypass. It would also serve as the primary upstream fish passage facility for adult fish and the primary facility for passing rearing habitat flows and juvenile salmonids into the Yolo Bypass. The components of the headworks shall include a concrete control structure, an upstream vehicular bridge crossing, and a concrete channel transition, which transitions the rectangular sides of the control structure to the side channel slopes of the transport channel.
- *Transport channel:* The transport channel shall serve as the primary facility for upstream adult fish passage between the existing Tule Pond and the headworks structure. It would also serve as the primary channel for conveying juvenile salmonids and rearing habitat flows from the headworks structure to the existing Tule Pond.
- *Downstream channel improvements:* Improvements shall be made to the existing channel that extends from the Tule Pond outlet to the beginning of Tule Canal. The improvements would be made to facilitate upstream adult fish passage between the existing Tule Canal and Tule Pond

The location of each of these facilities is described in Alternative 1 of the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Final EIR/EIS. The project also includes a supplementary fish passage structure located on the west side of Fremont Weir.

Permittee shall provide to CDFW, within six months, existing modeling (Hydrologic Engineering Center's River Analysis System (HEC-RAS) and Unsteady Flow Hydrodynamic Modeling (TUFLOW)), to evaluate the effectiveness of the Fremont Weir notch and associated infrastructure improvements as well as the west side supplemental fish passage structure on White Sturgeon passage.

10. Section 9, Compensatory Mitigation, is amended to add:

9.6 White Sturgeon Habitat Restoration Project Scoping. White Sturgeon are an anadromous fish native to California, where they primarily reside in San Francisco Bay and the Delta and spawn in the Sacramento and San Joaquin rivers and associated tributaries.

Within three months of Amendment No. 9's execution, Permittee, in collaboration with CDFW, shall convene and initiate funding to support the evaluation of potential habitat restoration project(s) within the Sacramento and San Joaquin rivers for White Sturgeon. The evaluation shall include but not be limited to scoping of potential restoration projects within the Sacramento and San Joaquin rivers.

Permittee shall submit a draft report documenting the results of the scoping process including associated restoration project recommendations to CDFW within nine months of Amendment No. 9's execution. The final report shall be submitted to CDFW within one year of submittal of the draft report for written approval by CDFW.

11. Section 10, Performance Security, Condition of Approval 10.1, (Security Amount), is amended as follows:

10.1 Security Amount. Estimated costs to implement acquisition, protection, restoration and perpetual management of the HM lands as shown in Tables 9-B and 9-C of this ITP and Condition of Approval 9.1.1, 9.1.2, 9.1.4, 9.2.1, and 9.2.2 **and to conduct the habitat restoration scoping required by Condition of Approval 9.6** total ~~\$367,735,300~~**\$367,585,300**.

Total costs to maintain the required long-term monitoring described in Section 3.13.1 of the Project Description are \$78,650,000. Estimated costs throughout the term of this ITP to implement studies and monitoring required in Conditions of Approval 6 through 9 and to support the Adaptive Management Program required by this ITP (Attachment 2) are estimated to total ~~\$21,643,503~~**\$21,618,503** per

year in addition to \$54,099,010 total per year carried forward from existing commitments into this ITP.

FINDINGS

Findings Pursuant to CESA: White Sturgeon

These findings are intended to document CDFW's compliance with the specific findings requirements set forth in CESA and related regulations. (Fish & G. Code § 2081, subs. (b)-(c); Cal. Code Regs., tit. 14, §§ 783.4, subds, (a)-(b), 783.5, subd. (c)(2).) The findings set forth herein are specific to the addition through Amendment No. 9 of White Sturgeon as a Covered Species. As to the other Covered Species under ITP No. 2081-2019-066-00,

CDFW finds based on substantial evidence in the ITP amendment application, Long-Term Operation of the California State Water Project Addendum to the Final Environmental Impact Report for the Coverage of White Sturgeon Under Incidental Take Permit No. 2081-2019-066-00, the results of consultations, and the administrative record of proceedings, that issuance of this ITP complies and is consistent with the criteria governing the issuance of ITPs pursuant to CESA:

- (1) Take of Covered Species as defined in this ITP will be incidental to the otherwise lawful activities covered under this ITP;
- (2) Impacts of the taking on Covered Species will be minimized and fully mitigated through the implementation of measures required by this ITP as amended and as described in the MMRP. Measures include: (1) Monitoring and science requirements specific to White Sturgeon to inform a systematic and transparent approach to new and ongoing science to address and prioritize key uncertainties related to the ITP and general species ecology. A primary goal of this effort is to improve management of White Sturgeon, and to identify potential management actions that could improve its status; (2) A real-time risk assessment process for consideration of White Sturgeon to determine entrainment minimization actions (e.g., export reduction and/or OMR Management); (3) Inclusion of White Sturgeon as a Covered Species for Clifton Court Forebay Aquatic Weed Control Practices; (4) Addition of Condition of Approval 7.9.2 Larval White Sturgeon Entrainment Monitoring; (5) Mitigation for impacts to White Sturgeon through inclusion of White Sturgeon in Condition of Approval 9.2.2 Implement the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project; and (6) Mitigation for impacts to White Sturgeon by initiating a habitat restoration project scoping process for identification and development of a project within the Sacramento River or San

Joaquin River where existing opportunities for White Sturgeon spawning and rearing are limited due to degraded habitat conditions. CDFW evaluated factors including scientific information regarding White Sturgeon and uncertainties associated with that information, an assessment of spatiotemporal distribution, historical detections in salvage, the extent to which the Covered Activities will take White Sturgeon, and the duration of Amendment No. 9, which is anticipated to be limited due to CDFW's current review and consideration of an application from Permittee to replace ITP No. 2081-2019-066-00. Based on this evaluation, CDFW determined that the scoping of a habitat restoration project, inclusion of benefits to White Sturgeon in the Yolo Bypass Salmonid Habitat Restoration and Fish Passage Project, and development of a White Sturgeon Science Program along with the minimization, monitoring, reporting, and funding requirements of this ITP minimizes and fully mitigates the impacts of the taking caused by the Project;

- (3) The take avoidance and mitigation measures required pursuant to the conditions of this ITP and its attachments are roughly proportional in extent to the impacts of the taking authorized by this ITP;
- (4) The measures required by this ITP maintain Permittee's objectives to the greatest extent possible;
- (5) All required measures are capable of successful implementation;
- (6) This ITP is consistent with any regulations adopted pursuant to Fish and Game Code sections 2112 and 2114;
- (7) Permittee has ensured adequate funding to implement the measures required by this ITP as well as for monitoring compliance with, and the effectiveness of, those measures for the Project; and
- (8) Issuance of this ITP will not jeopardize the continued existence of the Covered Species based on the best scientific and other information reasonably available, and this finding includes consideration of the species' capability to survive and reproduce, and any adverse impacts of the taking on those abilities in light of (1) known population trends; (2) known threats to the species; and (3) reasonably foreseeable impacts on the species from other related projects and activities. Moreover, CDFW's finding is based, in part, on CDFW's express authority to amend the terms and conditions of the ITP without concurrence of the Permittee as necessary to avoid jeopardy as required by law.

Findings on Amendment No. 9, Including on Findings Related to Delta Smelt, Longfin Smelt, Winter-run and Spring-run Chinook Salmon (Existing Covered Species):

Issuance of Amendment No. 9 will add a new species to those covered for take compared to the Project as originally approved; however, issuance of this Amendment will not increase the amount of take of the Existing Covered Species compared to the Project as originally approved, nor will this Amendment increase other Project impacts on the other Covered Species (i.e., “impacts of taking” as used in Fish and Game Code Section 2081, subd. (b)(2)).

Discussion: Amendment No. 9 reflects a change in the addition of a newly designated candidate species, White Sturgeon, which will be impacted by Project activities. CDFW has determined that although Amendment No. 9 will authorize take of the added Covered Species, the impacts of the taking will be minimized and mitigated through implementation of the Conditions of Approval (i.e., 7.9, 8.1.6, 8.14, 8.22, 9.2.2, and 9.6). The Covered Activities otherwise remain the same and no additional take of or impacts of the taking on the Existing Covered Species is anticipated.

Issuance of this Amendment does not affect CDFW’s previous determination that issuance of the ITP meets and is otherwise consistent with the permitting criteria set forth in Fish and Game Code section 2081, subdivisions (b) and (c).

Discussion: CDFW determined in March 2020 that the Project, as approved, met the standards for issuance of an ITP under CESA. This determination included findings that, among other things, the impacts of the taking would be minimized and fully mitigated and that the Project would not jeopardize the continued existence of the Existing Covered Species. Those findings are unchanged with respect to Amendment No. 9 because the Project and ITP as amended: does not alter the measures that will be undertaken to minimize and mitigate previously authorized impacts on the Existing Covered Species. Permittee’s continued adherence to and implementation of the avoidance, minimization and mitigation measures set forth in the Conditions of Approval of the ITP, as amended and associated MMRPs will minimize and fully mitigate impacts of the taking on the Covered Species.

None of the factors that would trigger the need for subsequent or supplemental environmental analysis of the Project under Public Resources Code section 21166 or California Code of Regulations, title 14, sections 15162 and 15163, exist as a result of this Amendment.

Discussion: CDFW issued the ITP in March 2020 as a responsible agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.) after, among other things, considering the Environmental Impact Report (EIR) certified by Permittee March 27, 2020. The certified Final EIR evaluated impacts of SWP operations in the Delta on White Sturgeon and concluded all impacts of the Project to


be less than significant. In June 2024, Permittee approved an Addendum to the Final EIR for the coverage of White Sturgeon under the ITP, and concluded that the proposed inclusion of White Sturgeon as a covered species under the 2020 LTO ITP does not require revisions to the conclusions or findings presented in the 2020 Final EIR because no new or substantially more intense or severe significant environmental impacts, or potentially significant environmental impacts would occur. As explained in the findings below, CDFW finds for purposes of CESA that Amendment No. 9 represents a major change in the Project as originally approved. However, for the reasons explained above, including the required implementation of Conditions of Approval required by this ITP, as amended, and as described in the MMRP, CDFW concludes Amendment No. 9 is not a change in the Project that has the potential to create a new significant effect not previously analyzed, a substantial change in the circumstances under which the Project is being undertaken requiring major revisions to previous CEQA documents, or new information of substantial importance. As a result, CDFW finds that no additional subsequent or supplemental environmental review is required by CEQA as part of CDFW's approval of this Amendment.

CDFW finds that this Amendment is a Major Amendment, as defined in California Code of Regulations, title 14, section 783.6, subdivision (c)(5).

Discussion: Amendment No. 9 authorizes take of an additional Covered Species. As described above, this change constitutes an increase in the scope of the take authorization, as well as a change in the minimization and mitigation measures required in the ITP through the addition of new science and monitoring requirements, real-time risk assessments and responses, and mitigation actions. Therefore, Amendment No. 9 will significantly modify the scope or nature of the permitted Project or activity, or the minimization, mitigation, or monitoring measures in the ITP. CDFW has determined that the change to the ITP constitutes a Major Amendment as defined in California Code of Regulations, title 14, section 783.6, subdivision (c)(5).

ISSUED BY THE CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

on 7/12/2024

DocuSigned by:

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Joshua Grover
Deputy Director
Ecosystem Conservation Division