

**YUBA COUNTY WATER AGENCY**

**LOWER YUBA RIVER ACCORD**

**ENVIRONMENTAL IMPACT REPORT**

**ADDENDUM NO. 3**

**State Clearinghouse No. 200506211**



**October 2014**

**TABLE OF CONTENTS**

**PAGE**

SECTION 1 – BACKGROUND AND PURPOSE OF THIS ADDENDUM..... 5

    1.1 Background ..... 5

        1.1.1 Background of the Yuba Accord ..... 5

        1.1.2 Background of Proposed Change to Yuba Accord ..... 6

    1.2 Purpose of the EIR Addendum..... 8

SECTION 2 – DESCRIPTION OF PROJECT CHANGES..... 10

SECTION 3 – ANALYTICAL APPROACH..... 11

    3.1 Fisheries Impact Considerations ..... 12

    3.2 Analytical Approach for Evaluating Fisheries and Aquatic Resources ..... 14

        3.2.1 Changed Conditions..... 14

        3.2.2 Hydrologic Modeling Scenarios ..... 14

        3.2.3 Hydrologic Model Simulation ..... 16

        3.2.4 Changed Conditions – San Luis Reservoir Operations..... 17

        3.2.5 Fisheries and Aquatic Resources Methodology..... 18

SECTION 4 – ENVIRONMENTAL ANALYSIS ..... 22

    4.1 San Luis Reservoir Fisheries and Aquatic Resources ..... 22

        4.1.1 Frequency of Low Point Storage Conditions..... 22

        4.1.2 Warmwater Fish..... 23

        4.1.3 Coldwater Fish ..... 26

SECTION 5 – CONCLUSION ..... 28

SECTION 6 – LITERATURE CITED ..... 28

**LIST OF FIGURES**

**PAGE**

Figure 1. San Luis Reservoir Intake and Outlet Facilities, including San Luis Dam. .... 10

Figure 2. Vicinity Map..... 13

Figure 3. Relationship between San Luis Reservoir Storage and Water Surface Elevation..... 17

Figure 4. Example of the thermal stratification process that occurs in lakes and reservoirs. .... 21

**LIST OF TABLES**

**PAGE**

Table 1. Frequency of Simulated Monthly Reductions in Water Surface Elevation of Six Feet or More under the Accord (2014 Delta) and Accord (2014 Delta) + San Luis Storage (April-June) Scenarios over the Entire Simulation Period (WY 1922-1994)..... 23

Table 2. Frequency of Simulated Monthly Reductions in Water Surface Elevation of Six Feet or More under the Accord (2014 Delta) and Accord (2014 Delta) + San Luis Storage (April) Scenarios over the Entire Simulation Period (WY 1922-1994). .... 24

Table 3. Long-term Average and Average by Water Year Type San Luis Reservoir Elevation under the Accord (2014 Delta) and Accord (2014 Delta) + San Luis Storage (April-June) Scenarios during April through November. ....**Error! Bookmark not defined.**

Table 4. Long-term Average and Average by Water Year Type San Luis Reservoir Storage under the Accord (2014 Delta) and Accord (2014 Delta) + San Luis Storage (April-June) Scenarios during April through November. .... 27

## Glossary of Terms Used in this Addendum

**Basis of Comparison:** A representation of the baseline condition, which is used as a standard of comparison. For impact assessment purposes in this document, the “Accord (2005 Delta)” and the “Accord (2014 Delta)” modeling scenarios are used as bases of comparison.

**Essentially Equivalent:** The difference in simulated reservoir water surface elevation or storage is within 1% under one model scenario, relative to another model scenario.

**Generally Similar (Water Surface Elevation and Storage):** Simulated reservoir water surface elevations or storages are not measurably different over most of all of the specific period evaluated.

**Generally Similar (Fisheries Habitat Conditions):** Fisheries habitat conditions are not sufficiently different overall to substantially affect a particular species/lifestage (i.e., substantially alter the behavior, likelihood of survival, reproductive success, etc.) under one scenario, relative to another scenario.

**Majority of the Time:** More than half of a particular exceedance probability distribution.

**Most of the Time:** The greatest in quantity, extent or degree. More than a majority, but not all.

**Proposed Rediversion of YCWA Transfer Water at San Luis Reservoir:** The proposed project-related change that is subject to evaluation in this document. For impact assessment purposes, the “Accord (2014 Delta) + San Luis Storage” modeling scenarios are used to represent operational scenarios associated with the proposed project-related change, which is compared to the basis of comparison.

**Slightly Higher (Water Surface Elevation and Storage):** Simulated water surface elevations or storages during a given period of time are higher by more than about 1% and less than 10% under one scenario, relative to another scenario.

**Slightly Lower (Water Surface Elevation and Storage):** Simulated water surface elevations or storages during a given period of time are lower by more than about 1% and less than 10% under one scenario, relative to another scenario.

**Substantial Change (Water Surface Elevation and Storage):** Changes in simulated reservoir water surface elevation or storage of 10% or more under one scenario, relative to another scenario.

# **SECTION 1 – BACKGROUND AND PURPOSE OF THIS ADDENDUM**

## **1.1 BACKGROUND**

Yuba County Water Agency (YCWA) is considering implementing a change to its Lower Yuba River Accord (Yuba Accord) Project (State Clearinghouse #2005062111) by adding San Luis Dam as an authorized point of rediversion. The federal Bureau of Reclamation (Reclamation) has requested that YCWA add San Luis Reservoir as a point of rediversion because Reclamation has determined that this change is needed in order for Reclamation to allow Central Valley Project (CVP) contractors to carry over Yuba Accord water to augment their CVP water supplies. Pursuant to Reclamation's request, and to implement the proposed project change if approved by YCWA's Board of Directors, YCWA has filed a petition with the State Water Resources Control Board (SWRCB) for a change to YCWA's water-right Permit 15026 to add San Luis Dam as an authorized point of rediversion until December 31, 2025, for the purpose of allowing carryover storage of up to 70,000 acre feet (AF) per year of YCWA transfer water in San Luis Reservoir for use by CVP contractors within places of use that are already authorized for YCWA transfer water. YCWA estimates that 70,000 AF is the maximum amount of carryover storage of YCWA transfer water that would occur in San Luis Reservoir in any one year.

### **1.1.1 BACKGROUND OF THE YUBA ACCORD**

YCWA is implementing the Yuba Accord, which is comprised of several elements including the following:

- YCWA's implementation of streamflow requirements for the lower Yuba River as approved as amendments to YCWA's water-right Permit 15026 by the SWRCB in its Corrected Order WR 2008-0014;
- The December 4, 2007 Agreement For The Long-Term Purchase Of Water From Yuba County Water Agency By The Department Of Water Resources (Water Purchase Agreement) between YCWA and DWR;
- Lower Yuba River Accord Agreements For The Conjunctive Use Of Surface And Groundwater Supplies between YCWA and, respectively, Brophy Water District, Browns Valley Irrigation District, Dry Creek Mutual Water Company, Hallwood Irrigation Company, Ramirez Water District, South Yuba Water District and Wheatland Water District; and
- The January 30, 2008 New Bullards Bar Reservoir Operations Amendment To The Yuba County Water Agency Power Purchase Contract between YCWA and Pacific Gas and Electric Company.

On October 23, 2007, YCWA's Board of Directors adopted Resolution No. 2007-23 and, as the lead agency under the California Environmental Quality Act (CEQA), certified the Final Environmental Impact Report/Environmental Impact Statement for the Proposed Lower Yuba River Accord (Final EIR). In Resolution No. 2007-23, YCWA's Board of Directors also:

- Adopted and approved certain CEQA Findings of Fact, a Statement of Overriding Considerations and a Mitigation Monitoring and Reporting/Environmental Commitments Plan; and
- Approved the Yuba Accord Alternative as described in the Final EIR as YCWA's project (Yuba Accord Project) and authorized and directed YCWA's General Manager to take the necessary steps to implement that Project.

As a responsible agency under CEQA, the SWRCB explicitly relied on the Final EIR in adopting Corrected Order WR 2008-0014, which approved not only the inclusion of the Yuba Accord streamflow requirements in YCWA's Permit 15026, but also the long-term transfer of certain water that YCWA releases under those requirements to the State Department of Water Resources (DWR) and, through DWR, Reclamation. Accordingly, in Corrected Order WR 2008-0014, the SWRCB approved the addition of the CVP's and the SWP's south Delta export diversion facilities as points of rediversion on YCWA's Permit 15026. The SWRCB approved the addition of those points of rediversion for the term of the Water Purchase Agreement, which ends on December 31, 2025. YCWA is authorized under Corrected Order WR 2008-0014 for the long-term transfer of up to a total of 200,000 AF per year of YCWA transfer water under Permit 15026.

### **1.1.2 BACKGROUND OF PROPOSED CHANGE TO YUBA ACCORD**

YCWA is considering the addition of San Luis Dam<sup>1</sup> as an authorized point of rediversion through the end of the Water Purchase Agreement, which is December 31, 2025. The addition of this point of rediversion would enable Reclamation to allow CVP contractors to carry over YCWA transfer water to augment their CVP water supplies for use within the CVP's authorized places of use, which was added as authorized places of use to YCWA's Permit 15026. YCWA is considering the addition of San Luis Dam as an authorized point of rediversion for this purpose until December 31, 2025 as a change to the Yuba Accord Project.

As explained below, the water that would be stored by adding San Luis Dam as a temporary authorized point of rediversion in Permit 15026 and to the Yuba Accord Project is water that would be transferred and exported from the Delta under the Yuba Accord's Water Purchase Agreement. Storage of YCWA transfer water in San Luis Reservoir would involve only water that is currently being transferred under the Accord.

Water exported from the Delta at the CVP Jones Pumping Plant is conveyed via the Delta-Mendota Canal and via the joint reach of the California Aqueduct to municipal and industrial (M&I) and agricultural contractors in the San Joaquin Valley (YCWA et al. 2007). Water from the Delta-Mendota Canal also is pumped into San Luis Reservoir, where the water commingles with SWP water exported at Banks Pumping Plant. CVP demands typically exceed Jones pumping capacity during the spring and summer months. During this period, the CVP depends on releases from San Luis Reservoir to augment pumping at the Jones Pumping Plant. San Luis Reservoir is used to meet demand when water demands and schedules for CVP contractors served from the Delta-Mendota Canal exceed the combined capacity of the Jones Pumping Plant

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<sup>1</sup> Also known as B. F. Sisk Dam (Reclamation 2009).

and the capacity of the State facilities (i.e., Banks Pumping Plant) to wheel water for the CVP. CVP water in San Luis Reservoir is subsequently either delivered to municipal & industrial or agricultural water users in Santa Clara and San Benito counties or released back into the Delta-Mendota Canal or the California Aqueduct (YCWA et al. 2007).

San Luis Reservoir typically provides little carry-over storage, and undergoes an annual drawdown and refill cycle (YCWA et al. 2007). More specifically, San Luis Reservoir enables the CVP and SWP to pump water into the reservoir during the wet season (October through March) and release water into the conveyance facilities during the dry season (April through September) when demands are higher. The CVP and SWP try to fill San Luis Reservoir by the end of March of each year. In April and May, export pumping from the Delta is limited by the San Joaquin River pulse period standards established by the SWRCB's Decision 1641, as amended, as well as fishery management actions under Section 3406(b)(2) of the Federal Central Valley Project Improvement Act. As a result, demand in the export service area (i.e., south of the Delta) exceeds Delta exports, and San Luis Reservoir begins its drawdown cycle. In July and August, irrigation demands typically peak, and San Luis Reservoir continues to be drawn down. Historically, San Luis Reservoir has usually reached its low-point in August or September (YCWA et al. 2007).

CVP contractors are interested in storing in San Luis Reservoir transfer water that would be purchased from YCWA. Reclamation requires the addition of San Luis Dam as an authorized point of rediversion to allow CVP contractors to store transfer water in San Luis Reservoir from one CVP contract year to another. Consistent with the 2014 temporary urgency change petition (see Yuba Accord Addendum #2), it is anticipated that CVP contractors will acquire the right to store water in San Luis Reservoir from one contract year to the next by executing Warren Act contract(s) with Reclamation to use a portion of Reclamation's storage space in the reservoir. Therefore, to accommodate this request from Reclamation to enable Reclamation to enter into future agreements to store YCWA transfer water in San Luis Reservoir, YCWA is seeking to add San Luis Dam as an authorized point of rediversion to YCWA's Permit 15026. The YCWA transfer water that Reclamation would approve for San Luis Reservoir carryover storage as a result of adding the proposed point of rediversion could be used within the CVP's authorized places of use. Corrected Order WR 2008-0014 added the entire CVP service area to Permit 15026's place of use. The current petition for change therefore does not seek to modify the existing authorized place of use for Permit 15026. The maximum quantity of water that may be stored in San Luis Reservoir as a result of this change would be up to 70,000 AF per year.

Diversions at the proposed authorized point of rediversion would be subject to all terms of any biological opinions and incidental take permits that apply to the operation of San Luis Reservoir by Reclamation and DWR. Also, the addition of San Luis Dam as an authorized point of rediversion would not authorize any diversions of water under Permit 15026 at Clifton Court Forebay and Jones Pumping Plant in addition to those authorized by Corrected Order WR 2008-0014. The proposed rediversion of YCWA transfer water for carryover storage in San Luis Reservoir would involve no changes to Yuba, Sacramento, or Feather Rivers or Delta operations under Corrected Order WR 2008-0014.

YCWA has modified the Yuba Accord Project twice previously, with an addendum to the Final EIR to support each modification. The first modification involved adding the Freeport Regional Water Authority's (FRWA) diversion on the lower Sacramento River as a point of redirection of YCWA transfer water on YCWA's Permit 15026. YCWA certified Addendum #1 to the Final EIR for that project modification on January 28, 2014. Among other things, Addendum #1's analysis considered changes to the hydrology of the Feather and Sacramento Rivers, and the Sacramento-San Joaquin Delta, that occurred following YCWA's 2007 certification of the Final EIR as a result of biological opinions that apply to the operation of the CVP and the SWP. (See section 3.2.2 below for more information.) Addendum #1 analyzed the effects of adding the FRWA diversion as a point of redirection of the YCWA transfer water in light of those changes to CVP and SWP operations. YCWA also certified Addendum #2 to the Final EIR on January 28, 2014. Addendum #2 addressed the temporary urgency addition of San Luis Dam to YCWA's Permit 15026 as a point of redirection to enable Reclamation to allow CVP contractors to retain YCWA transfer water stored in San Luis Reservoir in carryover storage from the 2013-2014 CVP contract year to the 2014-2015 CVP contract year. That temporary urgency addition expired in August 2014, so the Yuba Accord project change addressed by Addendum #2 is no longer in effect. That change, however, was a single-year example of the sort of long-term project change addressed in this Addendum.

## **1.2 PURPOSE OF THE EIR ADDENDUM**

As discussed above, YCWA certified the Final EIR for the Yuba Accord Project in 2007. CEQA limits lead agencies' authority to prepare additional EIRs for a project after certifying the initial EIR. Specifically, Public Resources Code Section 21166 states:

When an environmental impact report has been prepared for a project pursuant to this division, no subsequent or supplemental environmental impact report shall be required by the lead agency or by any responsible agency, unless one or more of the following events occurs:

- (a) Substantial changes are proposed in the project which will require major revisions of the environmental impact report.
- (b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report.
- (c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.

Pursuant to Public Resources Code Section 21166, and according to Section 15164(a) of the CEQA Guidelines, the lead 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 of those Guidelines requiring preparation of a subsequent EIR have occurred. Guidelines Section 15162 lists the conditions that would require the preparation of a subsequent EIR rather than an EIR addendum. Specifically, Guidelines Section 15162(a) states:

- (a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of 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 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.

Authorizing the addition of a new authorized point of rediversion of YCWA transfer water through December 31, 2025 would constitute a change to the project that YCWA analyzed in the Yuba Accord EIR under CEQA, because that EIR did not describe its proposed project as including an authorized point of rediversion located at San Luis Dam (see Section 2, below). The purpose of this Addendum is to describe changes to the Yuba Accord Project associated with the proposed addition of San Luis as an authorized point of rediversion, and to evaluate the effects to determine if new or potentially significant impacts may occur relative to the impacts evaluated in the Yuba Accord EIR.

This Addendum demonstrates that the addition of San Luis Dam as an authorized point of redirection of YCWA transfer water on YCWA's Permit 15026 to allow Reclamation to authorize CVP contractors to carry over that water in San Luis Reservoir storage would not trigger any of CEQA Guidelines Section 15162(a)'s conditions for the preparation of a subsequent EIR and that YCWA's adoption of an addendum to the Final EIR, therefore, is appropriate for that change to the Yuba Accord Project.

## SECTION 2 – DESCRIPTION OF PROJECT CHANGES

The proposed change to the Yuba Accord Project is the addition of a new authorized point of redirection on YCWA's Permit 15026 to enable Reclamation to allow carryover storage of up to 70,000 AF per year of YCWA transfer water in San Luis Reservoir for use by CVP contractors within places of use that are already authorized for that transfer water, for a period extending through a subsequent contract year (March 1 through February 28) from the year in which that water was initially stored. Stored transfer water would be released no later than the end of the CVP contract year immediately following its redirection into San Luis Reservoir. The proposed new point of redirection would be located on San Luis Creek at the point of diversion for San Luis Dam (**Figure 1**) within the SW ¼ of SE ¼ of projected Section 15, T10S, R8E, MDB&M at North 1,848,478 feet and East 6,393,579 feet by California Coordinate system in Zone 3 (NAD 83). To implement the proposed project change, if approved by YCWA's Board of Directors, YCWA has filed with the SWRCB a petition for change to add this authorized point of redirection to YCWA's water-right Permit 15026 through the term of the Water Purchase Agreement, which is through December 31, 2025.

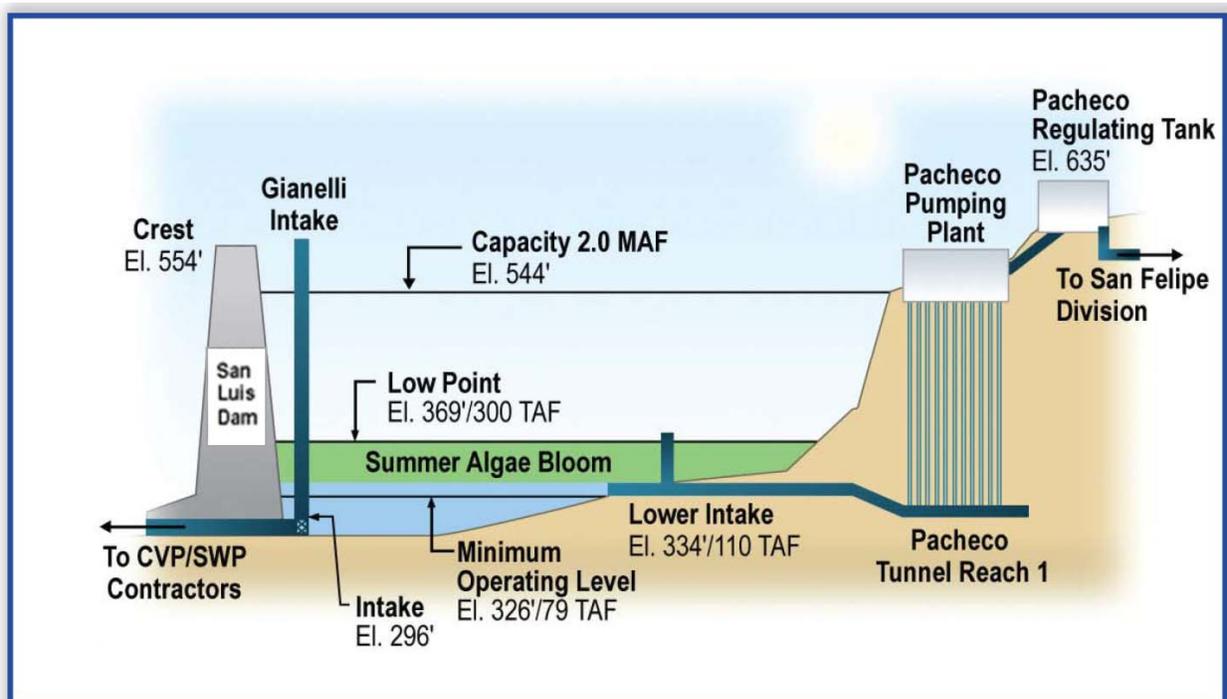


Figure 1. San Luis Reservoir Intake and Outlet Facilities, including San Luis Dam (Modified from Reclamation et al. 2011).

When there is water available for transfer, the Yuba Accord specifies that the first 60,000 AF of YCWA transfer water would be delivered to the Environmental Water Account or its successor, leaving a maximum of 140,000 AF of YCWA transfer water for delivery to the CVP and SWP contractors. Up to half of the remaining available transfer water, or 70,000 AF, could be stored in San Luis Reservoir for subsequent release, and remaining transfer water would be allocated for direct delivery. YCWA assumed available transfer water beyond the first 60,000 AF is split evenly on a monthly basis for direct diversion or storage in San Luis, which is reasonable to assume based on standard CVP Delta diversion practices. YCWA determined the allowable maximum volume of transfer water stored in San Luis Reservoir through discussions with potential users of YCWA transfers stored in San Luis Reservoir. If San Luis Reservoir were to fill to its gross maximum pool (2,039,000 AF), YCWA assumes any water otherwise stored above the gross maximum pool would be delivered in that month and would not be available for subsequent release.

The proposed change to the Yuba Accord Project would improve the availability of YCWA transfer water for CVP water contractors on a short-term basis only (i.e., from one contract year to the next), would not increase CVP overall long-term water supplies and, therefore, would not support additional growth or conversion of additional land to agricultural use. Additionally, the proposed project change would not alter any of YCWA's releases of water from its facilities, YCWA's compliance with Corrected Order WR 2008-0014 or YCWA's implementation of the Yuba Accord conjunctive use program under its Lower Yuba River Accord Agreements for the Conjunctive Use of Surface and Groundwater Supplies with its member units. The proposed project change also would not involve any construction at any site, including San Luis Dam and Reservoir.

## **SECTION 3 – ANALYTICAL APPROACH**

The Final Yuba Accord EIR considered the Yuba Accord's potential environmental impacts for the following resource categories:

- Surface Water Supply and Management;
- Groundwater Resources;
- Power Production and Energy Consumption;
- Flood Control;
- Surface Water Quality;
- Fisheries and Aquatic Resources;
- Terrestrial Resources;
- Recreation;
- Visual Resources;
- Cultural Resources;
- Air Quality;
- Land Use;
- Socioeconomics;
- Growth Inducement;

- Environmental Justice;
- Indian Trust Assets;
- Cumulative Impacts; and
- Climate Change Considerations

Because the proposed change to the Yuba Accord Project would not involve any changes to: (1) YCWA's operations in the Yuba River Basin; or (2) flow and water temperatures in the Feather and Sacramento rivers and the Delta, there is no potential for environmental impacts for many resource categories to be different than those that were analyzed in the Yuba Accord EIR and the prior addenda to it. In fact, because the proposed project change would only enable Reclamation to allow carryover storage of up to 70,000 AF of YCWA transfer water purchased under the Water Purchase Agreement for conveyance to, and use in, the already authorized places of use for YCWA transfer water, the only resource category that warrants evaluation in addition to the analysis conducted in the Yuba Accord EIR is fisheries and aquatic resources in San Luis Reservoir.

### **3.1 FISHERIES IMPACT CONSIDERATIONS**

As described in the Yuba Accord EIR (YCWA et al. 2007), San Luis Reservoir is located in Merced County at an elevation of 544 feet mean sea level (msl) and has a storage capacity of approximately 2 million acre feet (MAF). It was constructed as a storage facility south of the Delta, operated jointly by the CVP and SWP. Water is stored during the fall and winter months when Delta pumps can export more water than is needed for scheduled water demands. Similarly, water is released from San Luis Reservoir during spring and summer months when water demands are greater than the CVP's Delta export capacity. Water flows from the Delta to San Luis Reservoir via the California Aqueduct, the Delta-Mendota Canal and the O'Neill Forebay (**Figure 2**). Water is then pumped from the O'Neill Forebay into San Luis Reservoir during the winter and spring. During normal CVP/SWP operations the reservoir is drawn down by 100 feet or more during the late-summer and early-fall (YCWA et al. 2007).

San Luis Dam impounds San Luis Creek, but San Luis Reservoir is primarily an off-stream facility – one of the largest off-stream reservoirs in the world – so there is no natural fishery in the reservoir (Reclamation et al. 2008). San Luis Reservoir provides habitat for both coldwater and warmwater fish species, which include largemouth bass, striped bass, crappie, bluegill, bullhead catfish, shad, yellow perch and occasional white sturgeon (California State Parks Website 2007). Fish production in San Luis Reservoir is generally limited by changes in water elevations during critical spawning periods, overall reservoir levels, and the availability of shallow near-shore rearing habitat. Stocking by the California Department of Fish and Wildlife (CDFW) keeps the reservoir well supplied with trout. Bass fishing derbies are often held here, and crappie and bluegill are also caught. Fish species in the reservoir have either been directly introduced or transported via the California Aqueduct and Delta-Mendota Canal (Reclamation et al. 2008). San Luis Reservoir does not contain any populations of fish species that are either listed or proposed for listing under the Federal or State Endangered Species Acts (DWR 2007).

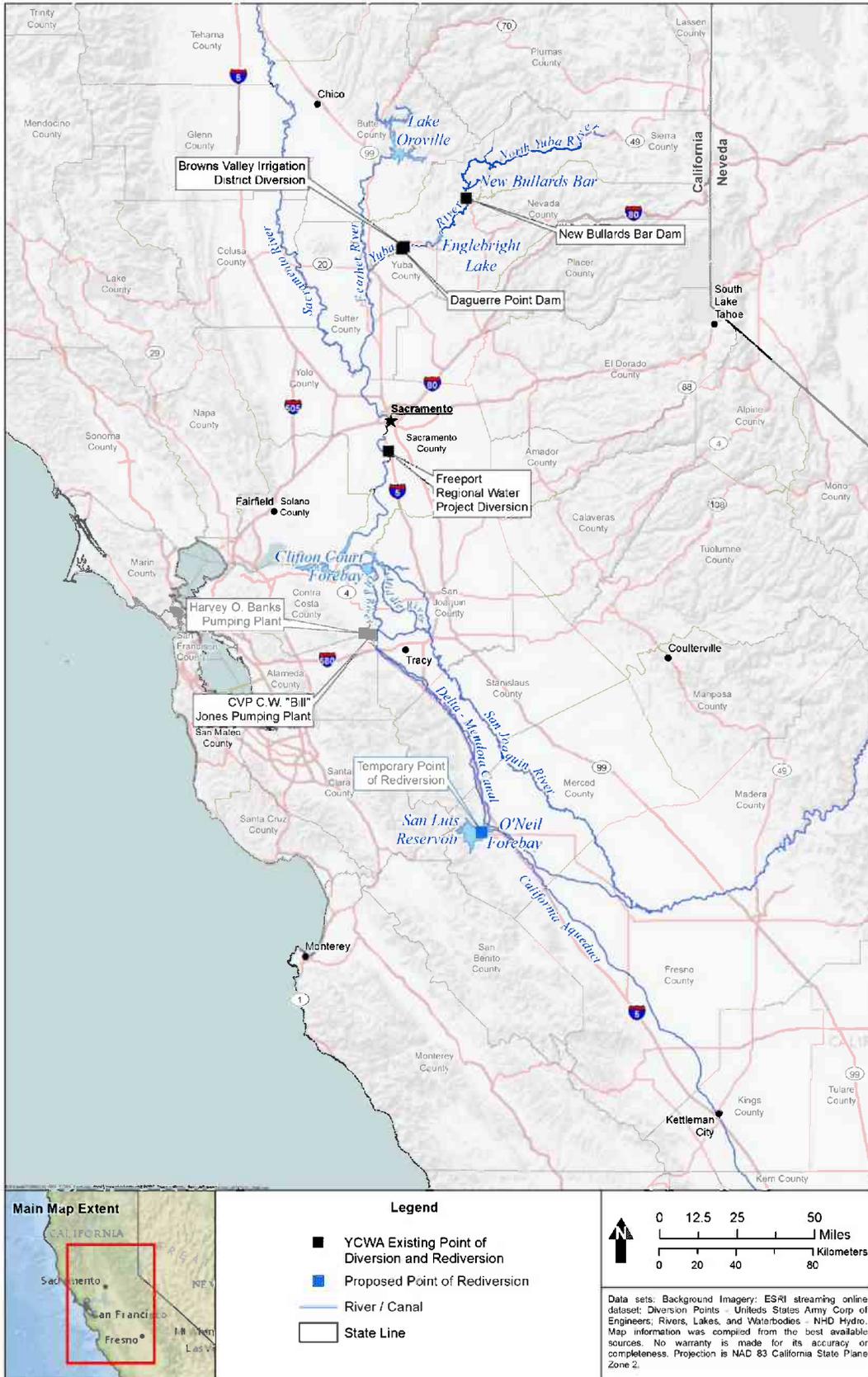


Figure 2. Vicinity Map.

## **3.2 ANALYTICAL APPROACH FOR EVALUATING FISHERIES AND AQUATIC RESOURCES**

Implementation of the proposed project change could temporarily alter storage levels and water surface elevations in San Luis Reservoir. Water surface fluctuations in San Luis Reservoir potentially can affect reservoir fish species due to alterations in the timing and magnitude of reservoir drawdowns. The methodologies and significance criteria used to analyze potential impacts on reservoir warmwater and coldwater fish species in San Luis Reservoir in this Addendum are consistent with those used in the Yuba Accord EIR as well as in the 2014 Yuba Accord EIR Addendum # 2, described below.

### **3.2.1 CHANGED CONDITIONS**

Since YCWA certified the Yuba Accord EIR in 2007, changed conditions associated with new regulatory requirements designed to be more protective of federally-listed fish species have resulted in substantial effects to the system-wide integrated operations of the CVP and the SWP throughout the Central Valley of California. These new regulatory requirements consist of implementation of Reasonable and Prudent Alternatives (RPAs) described in the 2008 United States Fish and Wildlife Service (USFWS) and 2009 National Marine Fisheries Service (NMFS) Biological Opinions (BOs) for Reclamation's and the DWR's Long-term Operation Criteria and Plan (OCAP) of the CVP and the SWP. Addendum #1 to the Yuba Accord EIR (January 2014) provides a brief summary of the USFWS 2008 and NMFS 2009 determinations in their respective BOs regarding whether Reclamation and DWR's continued operation of the CVP/SWP would jeopardize the continued existence of listed species, or result in the destruction or adverse modification of designated critical habitat. Addendum #1 to the Yuba Accord EIR contained a summary of the potential changes to the Feather and Sacramento rivers and Delta conditions associated with implementation of the USFWS and NMFS OCAP BOs, as well as anticipated changes due to implementation of the project changes proposed under that addendum.

The outcome of the ESA consultation process among Reclamation, DWR, NMFS and USFWS consequently resulted in system-wide CVP/SWP operational changes that occurred after YCWA's 2007 certification of the Yuba Accord EIR and that affect reservoir storages relevant to this addendum's analysis. Because those hydrologic conditions represent the environmental existing condition, they form the analytical baseline used to evaluate potential hydrologic changes associated with the storage of YCWA transfer water in San Luis Reservoir that could occur with the proposed project change of adding San Luis Reservoir as a point of rediversion for YCWA transfer water (See CEQA Guideline § 15126.2(a)).

### **3.2.2 HYDROLOGIC MODELING SCENARIOS**

Two different types of scenarios were simulated by hydrologic modeling to evaluate potential San Luis Reservoir storage and water surface elevation-related changes associated with the proposed rediversion of YCWA transfer water in San Luis Reservoir. These two types of scenarios include two sets of baseline conditions (Accord 2005 Delta and Accord 2014 Delta)

and six modeled scenarios representing simulated operations with the greatest potential to affect fisheries and aquatic resources in San Luis Reservoir. These scenarios are as follows.

- ❑ **Accord (2005 Delta)** – This scenario was evaluated in the Yuba Accord EIR as the Proposed Project. It includes the time series of San Luis Reservoir hydrology that reflect CVP/SWP operations (including regulatory requirements) as of 2005. CVP/SWP operations in 2007, when YCWA certified the Yuba Accord EIR, were subject to the same rules as 2005 CVP/SWP operations. For impact assessment purposes in this Addendum, the Accord (2005 Delta) scenario is used as a basis of comparison, as necessary.
- ❑ **Accord (2014 Delta)** – This scenario includes lower Yuba River flows as simulated for the Proposed Project in the Yuba Accord EIR, but includes the time series of Feather and Sacramento River flows and water temperatures, Delta conditions, and San Luis Reservoir hydrology that reflect CVP/SWP operations representative of 2014<sup>2</sup>. A further refinement includes limiting the export of YCWA transfer water from the Delta to the months of July, August, and September to reflect the constraints on the CVP’s and SWP’s capacity to convey transfer water from their Delta-export facilities that have resulted from the 2008/2009 USFWS/NMFS BOs. For impact assessment purposes in this Addendum, the Accord (2014 Delta) scenario is used as a basis of comparison.
- ❑ **Accord (2014 Delta) + San Luis Storage (April-June)** – This scenario adds an additional refinement to the Accord (2014 Delta) scenario, wherein YCWA transfer water can be re-diverted into San Luis Reservoir during the months of July through September, and released during April through June in equivalent monthly increments of the following year.
- ❑ **Accord (2014 Delta) + San Luis Storage (April)** – This scenario adds an additional refinement to the Accord (2014 Delta) scenario, wherein YCWA transfer water can be re-diverted into San Luis Reservoir during the months of July through September, and released during April of the following year.
- ❑ **Accord (2014 Delta) + San Luis Storage (May)** – This scenario adds an additional refinement to the Accord (2014 Delta) scenario, wherein YCWA transfer water can be re-diverted into San Luis Reservoir during the months of July through September, and released during May of the following year.
- ❑ **Accord (2014 Delta) + San Luis Storage (June)** – This scenario adds an additional refinement to the Accord (2014 Delta) scenario, wherein YCWA transfer water can be re-diverted into San Luis Reservoir during the months of July through September, and released during June of the following year.
- ❑ **Accord (2014 Delta) + San Luis Storage (October)** – This scenario adds an additional refinement to the Accord (2014 Delta) scenario, wherein YCWA transfer water can be re-

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<sup>2</sup> This scenario includes implementation of RPAs contained within the 2008/2009 USFWS/NMFS BOs.

diverted into San Luis Reservoir during the months of July through September, and released during October of the same year.

- ❑ **Accord (2014 Delta) + San Luis Storage (November)** – This scenario adds an additional refinement to the Accord (2014 Delta) scenario, wherein YCWA transfer water can be re-diverted into San Luis Reservoir during the months of July through September, and released during November of the same year.

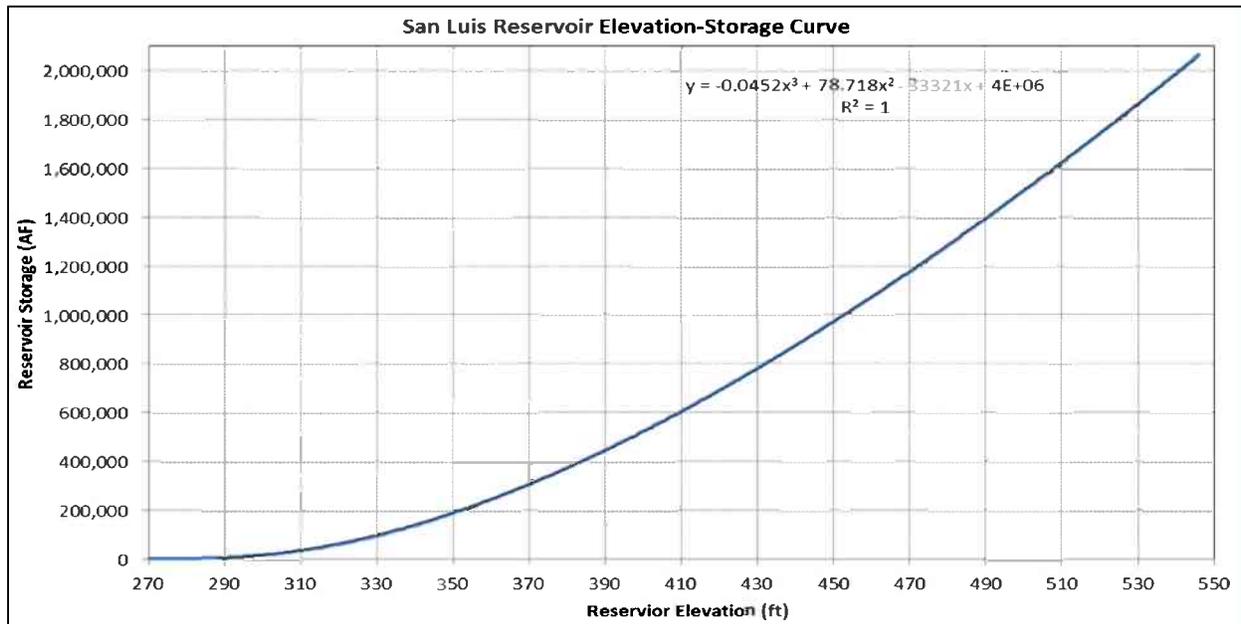
The six proposed project change scenarios were used to evaluate potential impacts to San Luis Reservoir fisheries because stored YCWA transfer water could be released from the reservoir under any number of permutations of combinations of monthly releases. The six evaluated proposed project change scenarios were designed to encompass the range of potential impacts to San Luis Reservoir fisheries and aquatic resources.

In the first proposed project change scenario (Accord (2014 Delta) + San Luis Storage (April-June)), the amount of YCWA transfer water stored in the previous year is released in equivalent amounts during the months of April, May and June of the following year. The months of April through June are months of interest because warmwater (nest building) fisheries spawning generally occurs during March through June in San Luis Reservoir, and may potentially be affected by reductions in water surface elevation associated with releases from San Luis Reservoir. In addition, warmwater juvenile fish rearing may generally occur from April through November, and could potentially be affected by changes in littoral habitat availability associated with changes in reservoir water surface elevations. Because San Luis Reservoir water surface elevations generally increase during the month of March, and because March occurs before the typical irrigation season and demands are relatively low, only the months of April through June were included in this scenario. In the five remaining proposed project change scenarios, all of the YCWA transfer water re-diverted during the previous contract year would be released in the following contract year during a single month, specifically during April, May, June, or during the same contract year during October or November. These five scenarios were identified as likely resulting in the greatest potential for impacts to fisheries in San Luis Reservoir due to the potential for changes in water surface elevation affecting warmwater fisheries, as well as for coldwater fisheries when San Luis Reservoir is thermally stratified (generally during April through November). The months of July through September were excluded as periods of releases of YCWA transfer water because San Luis Reservoir typically is being filled during these months under the proposed project change.

### **3.2.3 HYDROLOGIC MODEL SIMULATION**

CalSim II hydrologic model output (i.e., end of month San Luis Reservoir storage) was used to calculate the long-term average San Luis Reservoir storage, by month, occurring over the water year (WY) 1922 through 1994 simulation period, under the basis of comparison (i.e., Accord (2005 Delta) and Accord (2014 Delta) scenarios) and the proposed redirection of YCWA transfer water at San Luis Reservoir (i.e., Accord (2014 Delta) + San Luis Storage scenarios). This period of record for all scenarios is consistent with the period of record simulated for the Yuba Accord EIR. Monthly San Luis Reservoir water surface elevation was obtained from the simulated monthly storage values using a known relationship between San Luis Reservoir

storage and water surface elevation (**Figure 3**). Additionally, for the Accord (2014 Delta) and proposed project change scenarios, modeling assumptions include current representations of the Feather and Sacramento rivers and Delta, as described in the California Department of Water Resources (DWR) 2013 Delivery Reliability Report (DRR) CalSim II modeling using an existing (2013) level of development.



**Figure 3. Relationship between San Luis Reservoir Storage and Water Surface Elevation.**

### 3.2.4 CHANGED CONDITIONS – SAN LUIS RESERVOIR OPERATIONS

As discussed above, new regulatory requirements have resulted in substantial effects to the system-wide integrated operations of the CVP and the SWP throughout the Central Valley of California since YCWA certified the Yuba Accord EIR in 2007. These effects have indirectly affected San Luis Reservoir operations, resulting in altered San Luis Reservoir storage conditions under current conditions relative to 2007. **Attachment A** provides comparative probability of exceedance distribution figures for San Luis Reservoir storage and water surface elevation for the Accord (2005), Accord (2014 Delta) and each of the Accord (2014 Delta) + San Luis Storage model scenarios for all months of the year. As described in the Yuba Accord EIR, exceedance curves generally represent the probability that modeled storages and water surface elevations would be met or exceeded during a certain time period. Therefore, exceedance curves demonstrate the cumulative probabilistic distribution of storages and elevations for each month under a given simulation.

Examination of the storage exceedance distributions indicate that monthly storage is generally lower or similar over most of the distributions for all months of the year, under the Accord (2014 Delta), relative to the Accord (2005 Delta) scenario. Specifically, monthly storages under the Accord (2014 Delta) scenario are lower over approximately the lower 40 percent of the distribution during October, lower over most of the distributions during November and December, lower over nearly the entire distributions during January through June, lower over

approximately half of the distribution during July, and lower over approximately the lower 30-40 percent of the distributions during August and September. Storage is slightly higher under the Accord (2014 Delta) scenario over about 20 percent of the distribution during August and over about 50 percent of the distribution during September, relative to the Accord (2005 Delta) scenario.

The water surface elevation exceedance distribution curves generally exhibit trends that are very similar to those described for San Luis Reservoir storage under the Accord (2014 Delta) and the Accord (2005 Delta) scenarios. As demonstrated by the storage and water surface elevation exceedance distributions, the volume of water stored in San Luis Reservoir has generally been reduced under current existing conditions (Accord (2014 Delta) scenario), relative to the Yuba Accord EIR proposed project scenario (Accord (2005 Delta)).

### **3.2.5 FISHERIES AND AQUATIC RESOURCES METHODOLOGY**

To evaluate potential fisheries impacts in San Luis Reservoir, initial comparisons were made between the proposed redirection of YCWA transfer water at San Luis Reservoir, and the environmental existing condition as the basis of comparison. The basis of comparison was represented in hydrologic simulation by the Accord (2014 Delta) Scenario, and the proposed redirection of YCWA transfer water at San Luis Reservoir are represented by the six Accord (2014 Delta) + San Luis Storage scenarios. Average monthly simulated storages and water surface elevations by water year type, as defined by the Sacramento Valley 40-30-30 Index, also were calculated for the basis of comparison and the proposed redirection scenarios of YCWA transfer water at San Luis Reservoir. Presented in tabular format, the data tables for the long-term average storages and water surface elevations by month, and the average monthly storages and water surface elevations by water year type, demonstrate the changes that could be expected to occur with implementation of the proposed redirection of YCWA transfer water at San Luis Reservoir, relative to the basis of comparison.

To the extent that the comparison of the Accord (2014 Delta) + San Luis Storage scenarios versus the Accord (2014 Delta) scenario identifies any potential impacts, a secondary evaluation is conducted. Any identified potential impacts demonstrated by the Accord (2014 Delta) + San Luis Storage scenario are then compared to the Accord (2005 Delta) scenario analyzed in the Accord EIR. Per CEQA Guideline §15162 and §15164, this comparison is conducted to identify any new potentially significant impacts, or a substantial increase in the severity of previously identified significant impacts, beyond those presented and evaluated in the Yuba Accord EIR.

San Luis Reservoir storage and water surface elevation exceedance curves were developed for the entire simulation period (WY 1922 through 1994) and illustrate the distribution of San Luis Reservoir storage and water surface elevation under the proposed redirection of YCWA transfer water at San Luis Reservoir and the bases of comparison.

The reservoir parameters used to determine potential Yuba Accord impacts on fisheries (YCWA et al. 2007) included:

- End-of-month reservoir storage levels under the proposed project change compared to the basis of comparison
- End-of-month water surface elevations under the proposed project change compared to the basis of comparison

As an additional consideration, algae occurs naturally near the surface of reservoirs, and when reservoir levels are high, water is pumped from intakes located considerably below the surface of the reservoir, thus avoiding the algae blooms. Elevated water temperatures and typically low reservoir levels during the summer months create conditions that foster algae growth in the surficial waters of San Luis Reservoir (Reclamation 2013). As water is released to meet CVP/SWP contract requirements, San Luis Reservoir levels decline, and the surface of the water in the reservoir moves closer to the level of the intake pumps (see Figure 1). During most years, the storage level in San Luis Reservoir remains above 300 thousand acre feet (TAF), which corresponds to the water surface elevation at which “low point” conditions are likely to occur (Reclamation et al. 2011). Fish populations in San Luis Reservoir can be affected by drawdown of San Luis Reservoir below 300 TAF (369 feet msl). When the reservoir surface elevation drops during summer months, and algae blooms form, oxygen levels in the water column begin to fall as decomposing algae is broken down by bacteria that consume oxygen in the water. In general, the effect of the algae bloom on reservoir oxygenation intensifies as the reservoir is drawn down and algae blooms become more concentrated. The potential for adverse effects to fisheries resources in San Luis Reservoir resulting from reduced dissolved oxygen concentrations associated with the proposed project change, relative to the basis of comparison, also is evaluated by comparing the frequency that San Luis Reservoir storage would drop below 300 TAF under the Accord (2014 Delta) + San Luis Storage scenario, relative to the basis of comparison, in the effects assessment section of this Addendum.

### *Warmwater Fisheries*

Because warmwater fish species of San Luis Reservoir (including largemouth bass, smallmouth bass, spotted bass, green sunfish, bluegill, crappie, and catfish) use the warm upper layer of the reservoir and nearshore littoral habitats throughout most of the year, seasonal changes in reservoir storage, as it affects reservoir water surface elevation (feet msl), and the rates at which water surface elevation change during specific periods of the year, can directly affect the reservoir's warmwater fish. Reduced water surface elevations can potentially reduce the availability of nearshore littoral habitats used by warmwater fish for rearing, thereby potentially reducing rearing success and subsequent year-class strength. In addition, decreases in reservoir water surface elevation during the primary spawning period for warmwater fish nest building may result in reduced initial year-class strength through warmwater fish nest “dewatering” (YCWA et al. 2007).

Given the differences in geography and altitude among the reservoirs within the area of analysis for the Yuba Accord, warmwater fish spawning and rearing periods varied somewhat among reservoirs analyzed in the Yuba Accord EIR. Although black bass spawning may begin as early

as February, or as late as May, in southern and northern California reservoirs, respectively, and may possibly extend to July in some waters, the majority of black bass and other centrarchid spawning in California occurs from March through May (Lee 1999; Moyle 2002). However, to examine the potential for nest dewatering events to occur given the geographic and altitudinal variation among CVP/SWP and non-Project reservoirs, the Yuba Accord EIR assumed that the warmwater fish-spawning period extends from March through June (YCWA et al. 2007). Additionally, the period of April through November is appropriate for assessing impacts on warmwater juvenile fish rearing (YCWA et al. 2007).

For analytical purposes in this Addendum, and consistent with the certified Yuba Accord EIR, the warmwater fish-spawning period is assumed to extend from March through June, and the warmwater fish-rearing period is assumed to extend from April through November. These periods encompass the majority, if not the entire, primary warmwater fish spawning and rearing periods for San Luis Reservoir.

To assess potential reservoir water surface elevation change-related impacts on the warmwater fish of San Luis Reservoir, the following approach was used. The magnitude of change (feet msl) in reservoir water surface elevation expected to occur during the primary spawning period for nest-building fish (March through June) was considered for both the basis of comparison and the proposed project change. Review of the available literature suggests that, on average, self-sustaining black bass populations in North America experience a nest success (i.e., the nest produces swim-up fry) rate of 60% (Friesen 1998; Goff 1986; Hunt and Annett 2002; Hurley 1975; Knotek and Orth 1998; Kramer and Smith 1962; Latta 1956; Lukas and Orth 1995; Neves 1975; Philipp *et al.* 1997; Raffetto *et al.* 1990; Ridgway and Shuter 1994; Steinhart 2004; Turner and MacCrimmon 1970).

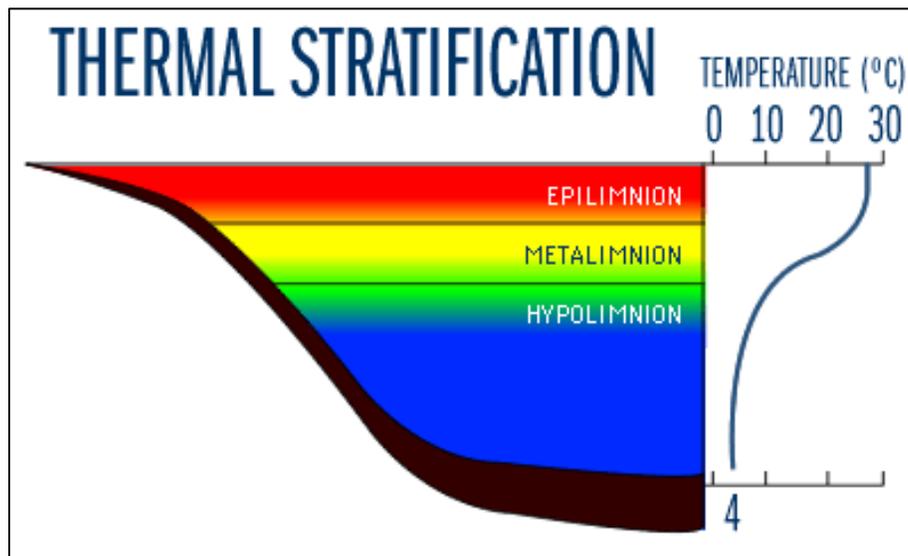
A study by CDFW, which examined the relationship between reservoir water surface elevation fluctuation rates and nesting success for black bass, suggests that a reduction rate of approximately six feet per month or less would result in 60% or higher nest success for largemouth bass and smallmouth bass (Lee 1999). Therefore, a decrease in reservoir water surface elevation of six feet or more per month was selected as the threshold representing potential adverse impact on the spawning success of nest-building, warmwater fish. To evaluate potential impacts on largemouth bass, smallmouth bass, and ultimately warmwater fish in general, the assessment considered the potential for San Luis Reservoir reductions of six feet or more per month to occur with implementation of the proposed project change scenarios compared to the basis of comparison.

Consistent with the Yuba Accord EIR (YCWA et al. 2007), the rearing period for warmwater reservoir fish is believed to generally extend from April through November. According to Blanton (2014), San Luis Reservoir has about 65 miles of shoreline containing productive coves, flooded willow trees, flats, rock banks, islands, and underwater shoals, all of which may provide aquatic habitat for rearing fish. In order to indirectly evaluate potential effects to littoral habitat availability for juvenile warmwater fishes, changes in water surface elevations were evaluated under the proposed project change scenarios relative to the basis of comparison during April through November.

Criteria for reservoir water surface elevation increases (nest flooding events) have not been developed by CDFW (YCWA et al. 2007). Because of overall reservoir fishery benefits (e.g., an increase in the availability of littoral habitat for warmwater fish rearing), greater reservoir elevations that would be associated with rising water levels would offset negative impacts due to nest flooding (Lee 1999). Therefore, the likelihood of spawning-related impacts from nest flooding was not addressed for reservoir fisheries.

### *Coldwater Fisheries*

During the period when San Luis Reservoir is thermally stratified (generally April through November), coldwater fish (e.g., trout) within the reservoir primarily reside in the reservoir's metalimnion and hypolimnion (**Figure 4**) where water temperatures remain suitable.



**Figure 4. Example of the thermal stratification process that occurs in lakes and reservoirs (Taken from EPA 2014).**

Reduced reservoir storage during this period could reduce the reservoir's coldwater pool volume, thereby reducing the quantity of habitat available to coldwater fish species during these months. Reservoir coldwater pool size generally decreases as reservoir storage decreases, although not always in direct proportion because of the influence of reservoir basin morphometry. Therefore, to evaluate storage-related impacts on coldwater fish habitat availability in San Luis Reservoir, the assessment considered the potential for end-of-month storage under the proposed change to the Yuba Accord Project to reduce coldwater pool volume, as compared to expected end-of-month storage under the basis of comparison during the April through November period. Substantial reductions in reservoir storage are considered to result in substantial reductions in coldwater pool volume and, therefore, in habitat availability for coldwater fish.

## **SECTION 4 – ENVIRONMENTAL ANALYSIS**

The Yuba Accord EIR contains a comprehensive analysis of the potential environmental impacts of the Yuba Accord Project. Under CEQA (Public Resources Code Section 21166) and CEQA Guidelines Section 15162, the environmental analysis of a change to a project associated with a certified final CEQA document is limited to the potential incremental environmental impacts that could be associated with the project change. (*Temecula Band of Luiseno Mission Indians v. Rancho California Water District* (1996) 43 Cal.App.4<sup>th</sup> 425; *Sierra Club v. City of Orange* (2008) 163 Cal.App.4<sup>th</sup> 523.)

As discussed in the analysis below, YCWA has determined that the proposed change to the Yuba Accord Project and the circumstances in which it will be implemented will not result in any new significant environmental effects not addressed in the Yuba Accord EIR, a substantial increase in the severity of the environmental effects addressed in the Yuba Accord EIR, or in any other conditions that could require the preparation of a subsequent or supplemental EIR under CEQA and the CEQA Guidelines.

### **4.1 SAN LUIS RESERVOIR FISHERIES AND AQUATIC RESOURCES**

#### **4.1.1 FREQUENCY OF LOW POINT STORAGE CONDITIONS**

As previously discussed, the potential exists for warmwater and coldwater fish populations in San Luis Reservoir to be exposed to reduced levels of dissolved oxygen as algal blooms become more concentrated and reservoir storage approaches the “low point” of 300 TAF during August and September.

Calculation of the frequency of San Luis Reservoir storage lower than 300 TAF during August and September of the entire simulation period indicates that storage is below 300 TAF during 38 months (about 26.0%) under the Accord (2014 Delta) + San Luis Storage (April – June) scenario, compared to 40 months (approximately 27.4%) under the Accord (2014 Delta) scenario. In other words, there are slightly fewer occurrences of reducing San Luis Reservoir storage below the 300 TAF low point benchmark during August and September under the Accord (2014 Delta) + San Luis Storage (April – June) scenario relative to the Accord (2014 Delta).

Changes in the frequency of San Luis Reservoir storage lower than 300 TAF during August and September, relative to the Accord (2014 Delta) scenario, under the remaining five proposed project change scenarios (i.e., individual month withdrawal simulations) are identical to the Accord (2014 Delta) + San Luis Storage (April – June) scenario.

Because end of month San Luis Reservoir storage and water surface elevations would be below 300 TAF during August and September with a slightly lower probability under the proposed project change scenarios, it is expected that dissolved oxygen levels would remain similar to those that would occur under the basis of comparison. Therefore, the proposed project change would not be expected to reduce habitat suitability for warmwater and coldwater fish species in

the reservoir as a result of reduced dissolved oxygen concentrations related to the low point issue, relative to conditions that would occur without implementation of the proposed project change.

#### 4.1.2 WARMWATER FISH

##### *Habitat Availability During the Spawning/Nesting Season (March through June)*

As previously discussed, potential effects to warmwater fisheries in San Luis Reservoir are evaluated based on the occurrence of monthly reductions in water surface elevation of six feet or more during March through June.

##### Accord (2014 Delta) + San Luis Storage (April-June) Scenario

The frequency of six foot or greater monthly reductions in water surface elevation under the Accord (2014 Delta) + San Luis Storage (April-June) scenario, relative to the Accord (2014 Delta) scenario, are essentially equivalent during all months evaluated (**Table 1**).

**Table 1. Frequency of Simulated Monthly Reductions in Water Surface Elevation of Six Feet or More under the Accord (2014 Delta) and Accord (2014 Delta) + San Luis Storage (April-June) Scenarios over the Entire Simulation Period (WY 1922-1994).**

Simulation	Mar	Apr	May	Jun
Accord (2014 Delta)	0	63	70	72
Accord (2014 Delta) + San Luis Storage (April-June)	0	63	70	72
Difference	0	0	0	0
Percent Difference	0	0	0	0

Changes in the frequency of six foot or greater monthly reductions in water surface elevation under four out of five of the remaining proposed project change scenarios (i.e., individual month withdrawal simulations), relative to the Accord (2014 Delta) scenario, are identical to the Accord (2014 Delta) + San Luis Storage (April – June) scenario. These include the Accord (2014 Delta) + San Luis Storage (May), Accord (2014 Delta) + San Luis Storage (June), Accord (2014 Delta) + San Luis Storage (October), and Accord (2014 Delta) + San Luis Storage (November) scenarios. The analysis of the Accord (2014 Delta) + San Luis Storage (April) scenario is discussed below.

##### Accord (2014 Delta) + San Luis Storage (April) Scenario

The frequency of six foot or greater monthly reductions in water surface elevation under the Accord (2014 Delta) + San Luis Storage (April) scenario, relative to the Accord (2014 Delta) scenario are essentially equivalent during March, May and June, but occur with slightly higher frequency during April (3.2%) under the Accord (2014 Delta) + San Luis Storage (April) scenario (**Table 2**).

**Table 2. Frequency of Simulated Monthly Reductions in Water Surface Elevation of Six Feet or More under the Accord (2014 Delta) and Accord (2014 Delta) + San Luis Storage (April) Scenarios over the Entire Simulation Period (WY 1922-1994).**

Simulation	Mar	Apr	May	Jun
Accord (2014 Delta)	0	63	70	72
Accord (2014 Delta) + San Luis Storage (April)	0	65	70	72
Difference	0	2	0	0
Percent Difference	0	3.2	0	0

Although a slightly higher probability of a six foot or greater monthly reduction in water surface elevation may occur during one of the four spawning months evaluated under the Accord (2014 Delta) + San Luis Storage (April) scenario relative to the Accord (2014 Delta) scenario, this relatively small increase (3.2 percent) in probability during one month would not be anticipated to significantly adversely affect nesting success of warmwater fish species in San Luis Reservoir.

### Summary

Because the proposed project change scenarios would result in the same or very similar probabilities of reductions in water surface elevation of six feet or more during the warmwater fish spawning period as the basis of comparison, the proposed project change would be expected to provide generally similar habitat conditions for warmwater fish spawning, relative to the basis of comparison. The proposed change to the Yuba Accord Project also would not be anticipated to result in substantial reductions in the self-sustainability of warmwater fish populations.

In conclusion, in consideration of the evaluated changes in San Luis Reservoir water surface elevation, and associated potential impacts to the spawning lifestage of warmwater fish species in San Luis Reservoir, the proposed temporary rediversion of YCWA transfer water at San Luis Dam and Reservoir would not result in new significant environmental impacts or a substantial increase in the severity of previously identified significant impacts to warmwater fish species in the reservoir.

### *Habitat Availability During the Rearing Season (April through November)*

As previously described, this Addendum also evaluates potential changes in water surface elevations in San Luis Reservoir during the April through November warmwater juvenile fish rearing period.

Examination of the average end of month water surface elevations over the entire simulation period and by water year type during April through November under the Accord (2014 Delta) + San Luis Storage (April-June) and Accord (2014 Delta) scenarios (**Table 3**) indicates that elevations are generally similar or slightly higher during all months evaluated during all water year types under the proposed project change scenario. In addition, water surface elevation probability of exceedance distributions (Attachment A) also indicate that water surface elevations are generally similar or slightly higher under the Accord (2014 Delta) + San Luis Storage (April-June) scenario during April through November, relative to the basis of comparison.

**Table 3. Long-term Average and Average by Water Year Type San Luis Reservoir Water Surface Elevation under the Accord (2014 Delta) and Accord (2014 Delta) + San Luis Storage (April-June) Scenarios during April through November.**

Analysis Period	Mean Monthly Water Surface Elevation (ft)							
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
<b>Long-term</b>								
<b>Full Simulation Period<sup>1</sup></b>								
Accord (2014 Delta)	491	461	424	408	389	396	401	417
Accord (2014 Delta) + San Luis Storage (April-June)	492	461	424	408	389	397	403	418
Difference	0.5	0.3	0.0	0.0	0.4	1.6	1.5	1.3
Percent Difference <sup>3</sup>	0.1	0.1	0.0	0.0	0.1	0.4	0.4	0.3
<b>Water Year Types<sup>2</sup></b>								
<b>Wet</b>								
Accord (2014 Delta)	508	474	443	421	406	414	409	428
Accord (2014 Delta) + San Luis Storage (April-June)	508	474	443	421	406	414	410	428
Difference	0.2	0.1	0.0	0.0	0.0	0.1	1.0	0.8
Percent Difference <sup>3</sup>	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
<b>Above Normal</b>								
Accord (2014 Delta)	488	450	412	390	380	392	394	409
Accord (2014 Delta) + San Luis Storage (April-June)	488	450	412	390	380	392	395	410
Difference	0.3	0.1	0.0	0.0	0.0	0.0	0.8	0.7
Percent Difference <sup>3</sup>	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.2
<b>Below Normal</b>								
Accord (2014 Delta)	486	453	410	401	393	406	402	419
Accord (2014 Delta) + San Luis Storage (April-June)	487	453	410	401	393	406	404	421
Difference	0.8	0.5	0.0	0.0	0.0	0.0	2.3	2.0
Percent Difference <sup>3</sup>	0.2	0.1	0.0	0.0	0.0	0.0	0.6	0.5
<b>Dry</b>								
Accord (2014 Delta)	487	460	419	414	381	386	393	411
Accord (2014 Delta) + San Luis Storage (April-June)	487	461	419	414	382	390	394	412
Difference	0.4	0.2	0.0	0.0	1.1	4.3	0.8	0.7
Percent Difference <sup>3</sup>	0.1	0.0	0.0	0.0	0.3	1.1	0.2	0.2
<b>Critical</b>								
Accord (2014 Delta)	477	459	425	400	373	367	404	412
Accord (2014 Delta) + San Luis Storage (April-June)	478	460	425	400	374	371	406	415
Difference	1.0	0.6	0.0	0.0	0.8	3.7	2.7	2.6
Percent Difference <sup>3</sup>	0.2	0.1	0.0	0.0	0.2	1.0	0.7	0.6
1 Based on the 73-year simulation period (WY 1922-1994)								
2 As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB 1995)								
3 Relative difference of the monthly average								

The average end of month water surface elevations over the entire simulation period and by water year type, as well as water surface elevation probability of exceedance distributions during April through November under the remaining five proposed project change scenarios (i.e., individual month withdrawal simulations), relative to the Accord (2014 Delta) scenario, are generally similar or slightly higher during all months evaluated (Attachment A).

Because water surface elevations are either similar or slightly higher under the proposed project change scenarios relative to the basis of comparison, it is anticipated that habitat suitability for warmwater fish rearing in San Luis Reservoir would be generally similar under the proposed project change and the basis of comparison. In consideration of the evaluated changes in San Luis Reservoir water surface elevation, and associated potential impacts to the rearing lifestage of warmwater fish species in San Luis Reservoir, the proposed temporary redirection of YCWA transfer water at San Luis Dam and Reservoir would not result in new significant environmental impacts or a substantial increase in the severity of previously identified significant impacts to warmwater fish species in the reservoir.

### **4.1.3 COLDWATER FISH**

As previously described, simulated end of month storages during April through November are compared under the proposed project change scenarios, relative to the basis of comparison, to evaluate potential changes in habitat availability for coldwater fish.

As shown in **Table 4**, long-term average and average by water year type monthly storages during April through November under the Accord (2014 Delta) + San Luis Storage (April-June) scenario are generally similar or slightly higher during most months during all water year types, relative to the basis of comparison. Storages are somewhat higher during September of dry and critical water year types under the proposed project change (6.6 and 8.5% higher, respectively), relative to the basis of comparison. In addition, storage probability of exceedance distributions (Attachment A) also indicate that storages are generally similar or slightly higher during April through November. Therefore, the proposed project change may slightly improve habitat conditions for coldwater fisheries, particularly during September of dry and critical water years.

Long-term average and average by water year type monthly storages, as well as storage probability of exceedance distributions during April through November under the remaining five proposed project change scenarios (i.e., individual month withdrawal simulations), relative to the basis of comparison are generally similar to those described for the Accord (2014 Delta) + San Luis Storage (April-June) scenario, above (Attachment A).

In consideration of the evaluated changes in San Luis Reservoir storage under the proposed project change scenarios, and associated potential impacts to the coldwater fish species in San Luis Reservoir, the proposed temporary redirection of YCWA transfer water at San Luis Dam and Reservoir would not result in new significant environmental impacts or a substantial increase in the severity of previously identified significant impacts to coldwater fish species in the reservoir.

**Table 4. Long-term Average and Average by Water Year Type San Luis Reservoir Storage under the Accord (2014 Delta) and Accord (2014 Delta) + San Luis Storage (April-June) Scenarios during April through November.**

Analysis Period	Mean Monthly Storage (TAF)							
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
<b>Long-term</b>								
<b>Full Simulation Period<sup>1</sup></b>								
Accord (2014 Delta)	1,420	1,099	755	616	467	517	562	691
Accord (2014 Delta) + San Luis Storage (April-June)	1,426	1,101	755	616	469	528	572	702
Difference	5.4	2.7	0.0	0.0	2.7	11.0	10.5	10.5
Percent Difference <sup>3</sup>	0.4	0.2	0.0	0.0	0.6	2.1	1.9	1.5
<b>Water Year Types<sup>2</sup></b>								
<b>Wet</b>								
Accord (2014 Delta)	1,605	1,235	940	743	605	667	636	786
Accord (2014 Delta) + San Luis Storage (April-June)	1,607	1,236	940	743	605	668	643	793
Difference	2.7	1.4	0.0	0.0	0.2	1.1	6.8	6.8
Percent Difference <sup>3</sup>	0.2	0.1	0.0	0.0	0.0	0.2	1.1	0.9
<b>Above Normal</b>								
Accord (2014 Delta)	1,382	986	644	472	390	473	515	638
Accord (2014 Delta) + San Luis Storage (April-June)	1,384	988	644	472	390	473	520	642
Difference	2.8	1.4	0.0	0.0	0.0	0.0	4.2	4.2
Percent Difference <sup>3</sup>	0.2	0.1	0.0	0.0	0.0	0.0	0.8	0.7
<b>Below Normal</b>								
Accord (2014 Delta)	1,368	1,013	630	558	491	585	558	695
Accord (2014 Delta) + San Luis Storage (April-June)	1,377	1,017	630	558	491	585	574	711
Difference	8.6	4.3	0.0	0.0	0.0	0.0	15.7	15.7
Percent Difference <sup>3</sup>	0.6	0.4	0.0	0.0	0.0	0.0	2.8	2.3
<b>Dry</b>								
Accord (2014 Delta)	1,366	1,084	696	650	401	442	490	634
Accord (2014 Delta) + San Luis Storage (April-June)	1,370	1,086	696	650	408	471	496	640
Difference	4.0	2.0	0.0	0.0	7.6	29.2	5.9	5.9
Percent Difference <sup>3</sup>	0.3	0.2	0.0	0.0	1.9	6.6	1.2	0.9
<b>Critical</b>								
Accord (2014 Delta)	1,264	1,073	744	537	348	309	569	642
Accord (2014 Delta) + San Luis Storage (April-June)	1,274	1,078	744	537	354	336	592	665
Difference	10.5	5.2	0.0	0.0	6.2	26.2	22.5	22.5
Percent Difference <sup>3</sup>	0.8	0.5	0.0	0.0	1.8	8.5	4.0	3.5
1 Based on the 73-year simulation period (WY 1922-1994)								
2 As defined by the Sacramento Valley 40-30-30 Index Water Year Hydrologic Classification (SWRCB 1995)								
3 Relative difference of the monthly average								

## SECTION 5 – CONCLUSION

This Addendum documents that the proposed change to the Yuba Accord Project of adding San Luis Dam as an authorized point of rediversion of YCWA transfer water will not result in new significant environmental impacts not analyzed in the Yuba Accord EIR, substantial increases in the severity of significant impacts analyzed in the Yuba Accord EIR, or in any other conditions or circumstances that would require preparation of a subsequent or supplemental EIR under Public Resources Code Section 21166 and CEQA Guideline Section 15162. No such conditions or circumstances exist. Pursuant to CEQA Guideline Section 15614, this Addendum therefore constitutes the environmental analysis required by CEQA for the proposed change to the Yuba Accord Project.

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7021/YAI/Yuba Accord EIR Addendum 3\_10-17-2014 RSB clean