RECLAMATION
Managing Water in the West

Draft Environmental Assessment (EA)

Warren Act Contract For Storage And Conveyance of Non-CVP Water From Foresthill Public Utility District to Santa Clara Valley Water District in 2015

Central California Area Office Folsom, CA

April 2015

U.S. Department of the Interior
Bureau of Reclamation
Mid Pacific Region
Central California Area Office
Folsom, California

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Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Table of Contents

List of Tables and Figures

Appendices

A - Proposed Action Operational Scenarios
B - Cultural Resources Compliance Memo
C - Indian Trust Assets Compliance Memo
D - Bay-Delta Standards Contained in D-1641
E - Temporary Change Order Approval

List of Acronyms and Abbreviations

AF	acre-feet
AFRP	Anadromous Fish Restoration Program
amsl	above mean sea level
Banks	Harvey O. Banks Pumping Plant
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
D-1641	State Water Resources Control Board Decision 1641
Delta	Sacramento-San Joaquin Delta
DFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
DO	dissolved oxygen
DPR	California Department of Parks and Recreation
DWR	Department of Water Resources
FESA	Federal Endangered Species Act
FHDCP	Foresthill Divide Community Plan
FPUD	Foresthill Public Utility District
GHG	Greenhouse gas
ITA	Indian Trust Asset
M&I	Municipal & Industrial
MOA	Memorandum of Agreement
non-Project	Not part of the Central Valley Project
NMFS	National Marine Fisheries Service
Order	Temporary Change Order
PCB	polychlorinated biphenyl
PCWA	Placer County Water Agency
POU	place of use
Reclamation	U.S. Bureau of Reclamation
SCVWD	Santa Clara Valley Water District
SFPUC	San Francisco Public Utility Commission
SWP	State Water Project
SWRCB	State Water Resources Control Board
TDS	total dissolved solids
TOC	total organic carbon
EPA	United States Environmental Protection Agency
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WA	Warren Act

Section 1 Introduction

In accordance with the National Environmental Policy Act of 1969 (NEPA), as amended, the Bureau of Reclamation (Reclamation) has prepared this Environmental Assessment (EA) to evaluate and disclose any potential environmental impacts associated with the implementation of a temporary one-year Warren Act contract (Contract) with the Santa Clara Valley Water District (SCVWD). The proposed Contract between Reclamation and SCVWD would be for the conveyance of up to 2,000 acre-feet (AF) less 5% conveyance losses of non-Project water supplied by the Foresthill Public Utility District's (FPUD) Sugar Pine Reservoir on North Shirttail Canyon Creek for storage and conveyance through the Central Valley Project (CVP) facilities at Folsom Reservoir and Lake Natoma.

1.1 Background

Dry conditions and operational constraints limited CVP and State Water Project (SWP) deliveries to SCVWD this past year. In 2014, SCVWD received 5 percent of its SWP supply and 50 percent of its CVP supply. In 2013, SCVWD received 35 percent of its SWP supply and 70 percent of its CVP supply.

Given very low statewide reservoir storage levels entering into the current 2014-2015 water year, SWP and CVP contractors like SCVWD are experiencing another year of reduced water allocations. To meet current demand in the SCVWD service area, water transfers have become an important component in SCVWD's water supply for distribution to the 1.8 million residents (SCVWD 2015) living and working within SCVWD's countywide service area. Transfers from willing sellers are pursued each year to supplement SWP and CVP contract deliveries when supplies are limited.

In response to the low statewide water allocations, FPUD is proposing a temporary one-year transfer of 2,000 AF of its 2014 water supply from existing water rights to SCVWD for use within SCVWD's service area. To facilitate the transfer, the United States Bureau of Reclamation (Reclamation) proposes to execute a temporary one-year Warren Act (WA) contract authorizing the storage and conveyance of up to 2,000 AF less 5% conveyance loss of FPUD water through federal facilities.

The WA of 1911(43 U.S.C. §523) authorizes the Secretary of the Interior to execute WA contracts with water purveyors for the conveyance and storage of non-Project water (i.e., water not developed as part of the CVP) through federal facilities when excess capacity exists. This proposed contract is also subject to the provisions of other applicable laws including the Act of June 17, 1902 (32 Stat. 388), as amended and supplemented; Section 305 of the Act of March 5, 1992 (106 Stat. 59); and Section 3408 of Title XXXIV of the Act of October 30, 1992, the Central Valley Project Improvement Act (106 Stat. 4728).

Santa Clara Valley Water District

The SCVWD was formed in 1929 and serves Santa Clara County, California. The population of Santa Clara County as of January 1, 2014 was 1,868,558. Water used by the SCVWD comes from multiple sources; approximately 40 percent is conveyed through the Sacramento-San Joaquin Delta (Delta) by the SWP and the CVP, 15 percent is conveyed from the Hetch Hetchy system by San Francisco Public Utility Commission (SFPUC), and 30 percent from local supplies, including local surface and groundwater. The SCVWD's service area lies in both the SWP and CVP place of use (POU) (see Figure 1).

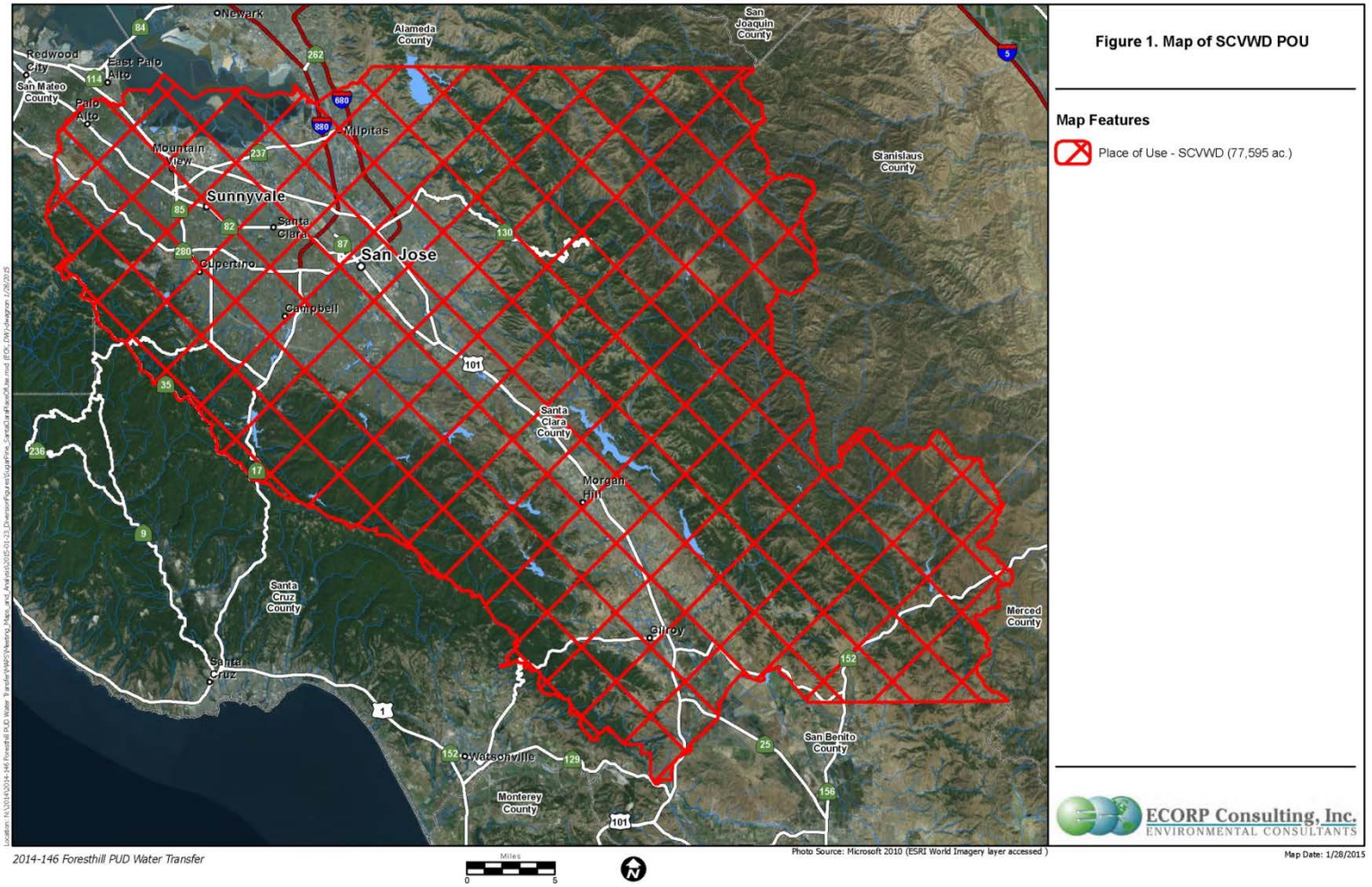
Foresthill Public Utility District

FPUD serves approximately 13,000 acres consisting of the unincorporated community of Foresthill in Placer County, California. FPUD's main water source is the Sugar Pine Reservoir, which has an existing storage capacity of 6,922 AF. Currently, Sugar Pine Reservoir has a surplus of water stored that is not scheduled for use by FPUD in 2015. Sugar Pine Reservoir, had reached full storage capacity prior to February 10, 2015. The water proposed for transfer is currently held in storage and would not be released in the absence of this transfer. Release of this water from storage would be non-Project water that otherwise would not be available to SCVWD. FPUD is currently proposing to transfer 2,000 AF of water to SCVWD.

1.2 Purpose and Need

Due to statewide water shortages, SCVWD does not have sufficient water to meet its current demands within its service area and faces deficits in its 2015 water supply. To reduce that deficit, SCVWD has entered into a water transfer agreement to acquire 2,000 AF, less 5% conveyance losses (1,900 AF), of supplemental water from FPUD. The Proposed Action would permit the use of CVP facilities to store and convey 2,000 AF of non-Project water supply from FPUD to SCVWD.

Figure 1. Map of SCVWD POU



Section 2 Proposed Action

2.1 No Action Alternative

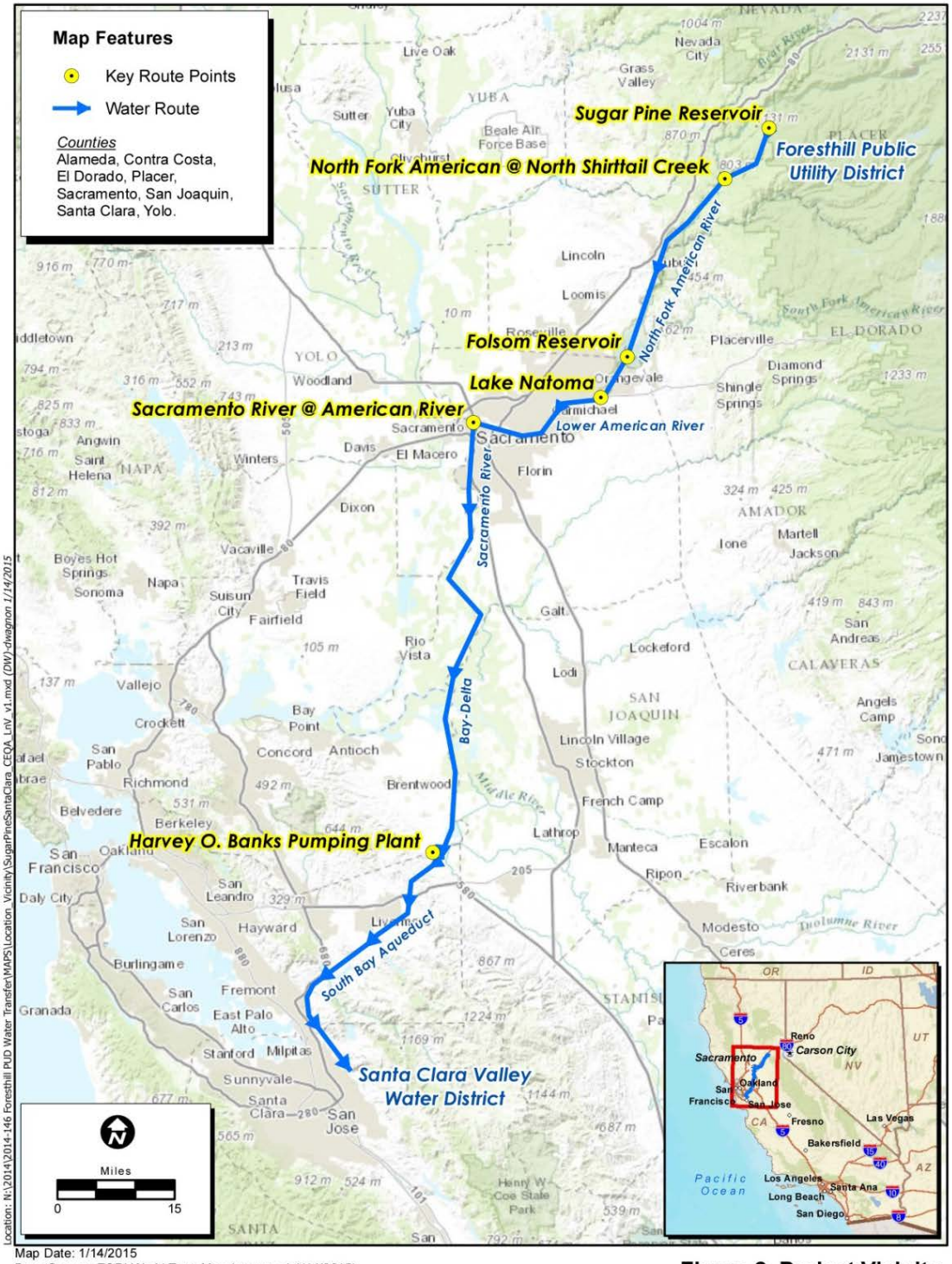
Under the No Action Alternative, Reclamation would not enter into a one-year WA contract with SCVWD. Therefore, SCVWD would not receive 1,900 AF of FPUD transfer water. As a result, there would be no change to instream flow releases in North Shirttail Canyon Creek, North Fork American River, Lower American River, Sacramento River, and the Delta. Furthermore, there would be no addition to the cold water pool in Folsom Reservoir.

2.2 Proposed Action

Reclamation proposes to enter into a temporary one-year WA contract for storage and conveyance of up to 2,000 AF, less 5% conveyance losses, of non-Project water through federal facilities from FPUD to SCVWD. The WA contract would authorize use of the federally owned Folsom Reservoir for storage and conveyance of the FPUD transfer water. The state-owned Banks pumping plant and South Bay Aqueduct would be utilized to convey the water to SCVWD (see Figure 2).

Under the proposed transfer, FPUD would release the 2,000 AF of transfer water from its Sugar Pine Reservoir into North Shirttail Canyon Creek which subsequently flows into the North Fork American River and Folsom Reservoir. Transfer water would be stored and later released in the 2014/2015 water year for conveyance through the Lower American River and Sacramento River to the SWP's Harvey O. Banks Pumping Plant (Banks), which would convey the FPUD water to the South Bay Aqueduct for delivery to SCVWD. See Figure 2 for the water transfer route and the state and federal facilities involved.

Figure 2. Proposed Action Vicinity, Water Route and Facilities



Map Date: 1/14/2015
Base Source: ESRI World Topo Map (accessed 1/14/2015)

Figure 2. Project Vicinity, Water Route and Facilities

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

FPUD will enter into a refill agreement with Reclamation to refill Sugar Pine Reservoir while protecting downstream vested water rights holders following the transfer.

The Proposed Action would not involve construction or modification of any facilities. Only existing facilities would be utilized to divert, release, convey and redivert water. Land uses within the FPUD and SCVWD service areas would not change as a result of the transfer.

The Proposed Action is subject to approval by The State Water Resources Control Board (SWRCB) for issuance of a Temporary Change Order (Order) to FPUD approving temporary changes in the Sugar Pine water right permit's place of use and points of rediversion prior to the execution of the Proposed Action. The Order was approved and issued by the SWRCB on April 13, 2015 (see appendix E), and allows the transfer water to be used in SCVWD within one year from the date of approval by the SWRCB (Reclamation 2013, 2014).

2.2.1 Operations

The operations plan for transferring 2,000 AF of water from FPUD to SCVWD would be to release 2,000 AF of stored water from FPUD's Sugar Pine Reservoir into North Shirttail Canyon Creek, then to the North Fork American River, and subsequently into Folsom Reservoir by June 1, 2015, as shown in Figure 3. The transfer water would be released from Folsom Reservoir into Lake Natoma, which is impounded by Nimbus Dam and serves as the re-regulating afterbay for Folsom Reservoir. The transfer water would be released from Folsom Reservoir at a steady rate from July through September 2015. Water would then be released simultaneously from Nimbus Dam into the Lower American River, and subsequently would flow into the Sacramento River and the Delta. The transfer water would be conveyed from the Banks Pumping Plant in the southern portion of the Delta into the South Bay Aqueduct and delivered to SCVWD facilities.

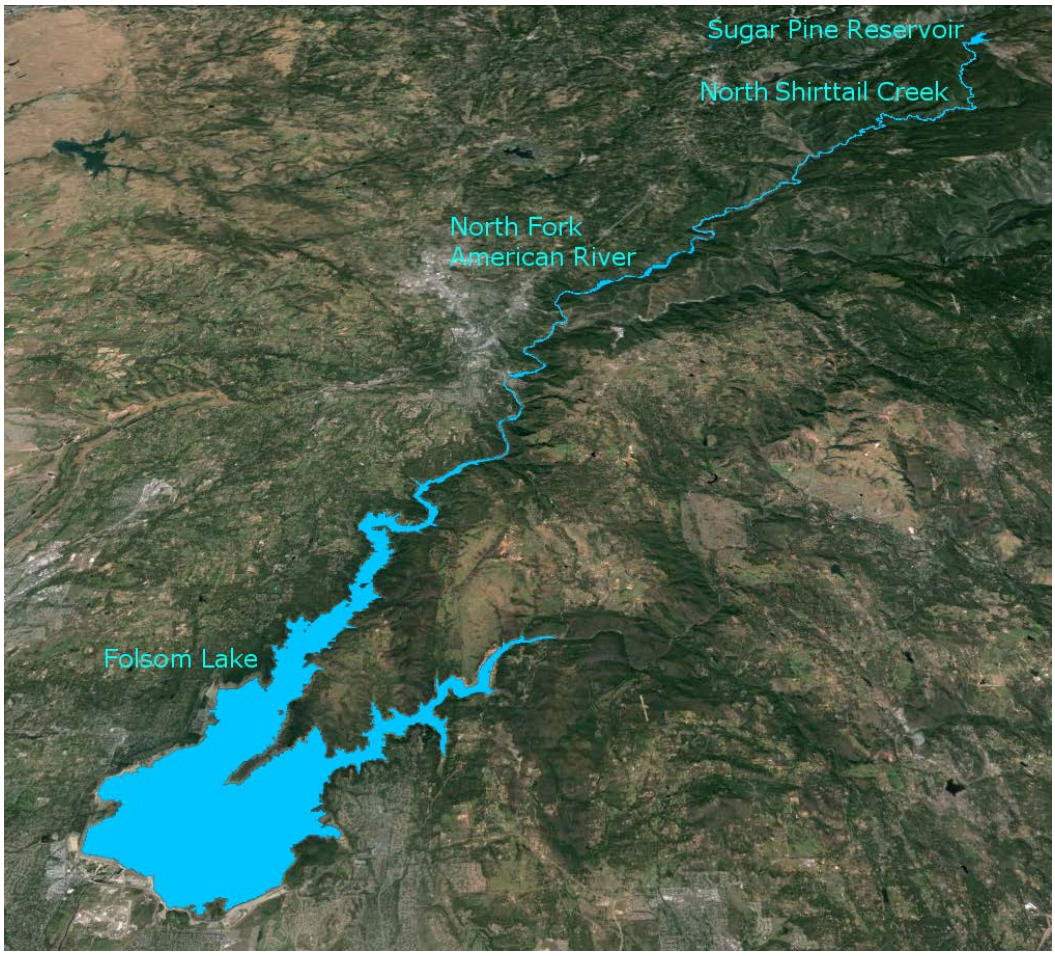


Figure 3. Delivery Route from Sugar Pine Reservoir to Folsom Reservoir.

Section 3 Affected Environment and Environmental Consequences

This EA does not analyze resources for which it would be reasonable to assume that no impacts would occur from the implementation of the Proposed Action. Specifically, potential impacts to , soils, geology, mineral resources, land use, visual resources, transportation, noise, hazards and hazardous materials, public services, utilities, and service systems. A temporary one-year Warren Act contract would not result in impacts to these resources or services. In addition to the resources stated above, Reclamation considered and determined that the Proposed Action would not impact the following resources:

Land Use

The Proposed Action includes no modification of the existing Federal water conveyance facilities and all water would be delivered within existing water service area boundaries utilizing existing water conveyance facilities. The Proposed Action would not change any land use or zoning designations and does not have a potential to affect land use.

Indian Sacred Sites

The Proposed Action would not limit access to or ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites.

Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property or rights held in trust by the United States for Indian Tribes or individual Indians. Indian reservations, Rancherias, and Public Domain Allotments are common ITAs in California. The Proposed Action does not have a potential to affect Indian Trust Assets (Appendix C, Indian Trust Assets Compliance Memo).

Cultural Resources

Reclamation's approval of water transfers using existing facilities with no changes in land use is the type of activity that does not have the potential to cause effects on historic properties pursuant to 36 CFR § 800.3(a)(1). Therefore, Reclamation has no further obligations under Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108).

Environmental Justice

The Proposed Action would not have any adverse impact on minority or low-income populations within the Action Area.

Socioeconomic Resources

The Proposed Action includes no modification of the existing Federal and State facilities and use of these facilities would remain within capacity, thus no jobs are

created or rescinded. The Proposed Action would not have any adverse impact on population or income within the Action Area.

Air Quality

The Proposed Action has no potential to cause direct or indirect emissions of criteria pollutants and particulate matter that equal or exceed thresholds; therefore a conformity analysis is not required pursuant to the Clean Air Act.

Global Climate Change

Greenhouse gas (GHG) emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present, and future projects contributes substantially to the phenomenon of global climate change and its associated environmental impacts and as such is addressed only as a cumulative impact.

The Proposed Action would not result in any modification of the existing Federal or State facilities and the use of these facilities would remain within capacity. The Proposed Action would not conflict with Assembly Bill 32 and has no potential to produce a significant amount of additional emissions of greenhouse gases.

3.1 Water Supply and Hydrology

3.1.1 Affected Environment

Water supply and hydrology is attributed to the annual regional precipitation and the water supplier agreements in-place for water purveyors. The following section describes the existing setting for water supply and hydrology within the Proposed Action Area. Water supply and hydrology for each section within the Proposed Action Area is discussed below.

Sugar Pine Reservoir and North Shirttail Canyon Creek

Reclamation began construction of the Sugar Pine Reservoir Project in 1979, and was generally completed in 1982. Operation and maintenance was transferred to the FPUD in 1984 (Reclamation 2009a), and in 2003 FPUD was conveyed all right, title, and interest in and to the Sugar Pine Reservoir Project (Reclamation 2003). The maximum storage capacity for this reservoir is 6,922 AF with a surface area of 165 acres (Reclamation 2009a). Sugar Pine Reservoir is located on North Shirttail Canyon Creek in the Lower North Fork American River watershed (HUC 1802012806), about 7.5 miles north of the town of Foresthill in Placer County at an elevation about 3,600 feet above mean sea level (amsl) in the Sierra Nevada foothills (EPA 2014). The spillway and full reservoir mark is at an elevation of 3,620 feet amsl. The minimum recreation pool from May 1 through September 30 is at an elevation of approximately 3,595 feet amsl (Figure 4).

FPUD has water rights for water storage and diversion for irrigation, municipal and industrial (M&I), recreational, and fishery maintenance uses in the Foresthill Divide area. FPUD's existing water right permit (permit 15375) includes a direct diversion limitation of 18 cfs from about November 1 of each year to about July 1 of the succeeding year. Current demand within the FPUD service area is approximately 1,000 AF of water for M&I and agricultural. The minimum instream flow requirement that must be maintained in North Shirttail Canyon Creek for fishery maintenance is 0.5 cfs; however, during normal years the minimum flow rate can be as high as 5 cfs from February 1 through May 31 (CDFW, 1967).

North Fork American River

The North Fork American River drains 996 square miles and has a section upstream of the North Shirttail Canyon Creek confluence, classified as Wild under the National Wild and Scenic Rivers System. The North Fork American River flows are unregulated until the North Fork Dam (a small debris dam) at Lake Clementine that is just upstream of the confluence with the Middle Fork American River. The Middle Fork American River joins the North Fork American River before flowing into Folsom Reservoir. The North Fork American River flows are a combination of regulated (Middle Fork American River) and unregulated flows (North Fork American River) until they reach Folsom Reservoir (SRWP 2015a). The flows are highest during snow melt in April and May.

Folsom Reservoir and Dam

Folsom Dam is located approximately 30 miles east of Sacramento. The maximum storage elevation of the dam is 466 feet amsl and the elevation of the river at the confluence with the Sacramento River is 23 feet amsl (SRWP 2015b).

Folsom Reservoir, a federal facility, would be used to convey and store water under the proposed WA contract. Folsom Reservoir is the principal reservoir on the American River, with a maximum storage capacity of 976,000 AF (Reclamation 2009b). Reclamation operates Folsom Dam and Reservoir for the purposes of flood control, meeting water contract obligations, providing downstream releases for the Lower American River, and helping to meet Delta water quality standards. The El Dorado Irrigation District, Placer County Water Agency (PCWA), City of Roseville, San Juan Water District, California State Prison, and the City of Folsom are the main entities that divert water from Folsom Reservoir (Reclamation 2014).

Lake Natoma and Nimbus Dam

Lake Natoma serves as the Folsom Dam afterbay and was formed as a result of Nimbus Dam. Lake Natoma has a maximum storage capacity of 8,760 AF, and inundates approximately 500 acres (Reclamation 2009c). Lake Natoma is operated as a re-regulating reservoir that accommodates the diurnal flow fluctuations caused by the power peaking operations at Folsom Power Plant.

Nimbus Dam, along with Folsom Dam, regulates water releases to the Lower American River (Reclamation 2014).

Nimbus Dam releases are nearly always controlled during significant portions of a water year by either flood control requirements, fishery requirements under the Central Valley Project Improvement Act (CVPIA) 3406(b)(2), or through coordination with other CVP and State Water Project (SWP) releases to meet downstream SWRCB Decision 1641 requirements in the Delta and CVP water quality objectives (Reclamation 2014).

Lower American River

The Lower American River consists of the 23-mile stretch of river from Nimbus Dam to the confluence of the American and Sacramento rivers in the City of Sacramento. Average Lower American River annual flows downstream of Folsom Dam at Fair Oaks are approximately 2,650,000 AF (Reclamation 2013).

Sacramento River

The Sacramento River originates near the slopes of Mount Shasta and flows southward to Suisun Bay. Sacramento River flows are controlled primarily by Reclamation's Shasta Dam. Flows in the Sacramento River normally peak during December through February. The drainage area upstream of the City of Sacramento is 23,502 square miles. The historical average annual flow for the Sacramento River at Freeport (water-gage recorder south of Sacramento) is 16,677,000 AF. The Feather and American rivers are the two largest contributors to the Sacramento River. The Lower Sacramento River is defined as that section of the river downstream of its confluence with the Lower American River (Reclamation 2014).

Sacramento-San Joaquin Delta

The Sacramento-San Joaquin Delta is the confluence of the Sacramento and San Joaquin rivers and where freshwater meets saltwater from the Pacific Ocean. The Delta legal boundary extends north along the Sacramento River to just south of the American River, south along the San Joaquin River to just north of the Stanislaus River, east to the City of Stockton, and west to Suisun Bay. Runoff from a variety of Central Valley streams accounts for approximately 95 percent of the inflows into the Delta (Reclamation 2013 and 2014). The Delta receives flows directly from the Sacramento, San Joaquin, Mokelumne, Cosumnes, and Calaveras rivers.

Inflows to the Delta averaged 27,800,000 AF annually from 1980 through 1991 and outflows to Suisun Bay averaged 21,020,000 AF during that period (Reclamation 2014). To a large extent, releases from Shasta, Folsom, New Melones, and Millerton reservoirs of the CVP, Lake Oroville of the SWP, and several locally operated reservoirs in the San Joaquin River Basin control the volume and timing of freshwater entering the Delta (Reclamation 2014).

The Delta is a major operational focus for SWP and CVP project facilities. The SWP operates the Banks Pumping Plant, which lifts the water to the California Aqueduct. Current CVP and SWP operations in the Delta are governed by a series of regulations and agreements with the SWRCB, US Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and California Department of Fish and Wildlife (CDFW) (Reclamation 2014).

3.1.2 Environmental Consequences

No Action

Implementation of the No Action Alternative would not change current water supply and hydrology conditions in Folsom Reservoir and the lower American River. Under the No Action Alternative, the transfer would not occur, and SCVWD would not receive the additional water supply. Additionally, instream flow in North Shirttail Canyon Creek, North Fork American River and Lower American River (below Nimbus Dam), Folsom Reservoir, Lake Natoma, Sacramento River, Delta and CVP and SWP facilities storage and flow would not change. Likewise, there would be no benefits to the Folsom Reservoir cold water pool resources.

Proposed Action

The analysis of the potential effects on water supply and hydrology associated with the Proposed Action was based on whether a reduction in Folsom Reservoir storage or lower American River flows below Nimbus Dam would be of sufficient magnitude to affect the water supply availability to CVP contractors. This analysis was based on the conveyance and withdrawal of 2,000 AF of FPUDs Sugar Pine Reservoir water.

Sugar Pine Reservoir and North Shirttail Canyon Creek

The water to be released is currently stored by FPUD in accordance with the existing water rights and would not otherwise be available to any legal water user. Additionally, FPUD would sign a reservoir refill agreement with Reclamation, ensuring that future refill of storage reduction in Sugar Pine Reservoir created by the transfer would not affect Folsom Reservoir storage, reflecting ongoing operations under FPUD's water rights.

Under the Proposed Action, storage at Sugar Pine Reservoir would be reduced by up to 2,000 AF or 28.9% beginning May 1 and concluding by June 1, 2015. In February 2015, Sugar Pine Reservoir was observed to be full and spilling.

The Proposed Action would increase stream flows below Sugar Pine Reservoir into North Shirttail Canyon Creek during May 2015 from 5 cfs (minimum stream flow requirement) to 39 cfs (minimum stream flow requirement of 5 cfs plus 34 cfs associated with release of transfer water) (Appendix A). The average daily unimpaired flow rate for the 2010-2014 period was approximately 62 cfs for April and 13 cfs for May. In May 2011, the average daily unimpaired flow rate was 47

cfs. The average daily unimpaired flow rate in April 2011 was 116 cfs. The peak daily unimpaired flow rate during the month of April 2011 was 143 cfs and for May it was 132 cfs (CNRFC 2015). The temporary increase would not be significant relative to historic flows and would not cause water flows to increase above normal seasonal fluctuations in May. No decrease in-stream flows required pursuant to water right permit and MOA would occur at any time during the year.

The decrease in reservoir storage at Sugar Pine Reservoir is less than the water physically available for transfer and would meet or exceed the minimum recreation storage capacity of 3,560 AF prescribed in the 1967 DFG Agreement incorporated into the Sugar Pine Reservoir Project and water right permit (See Figure 4). The full reservoir mark is at an elevation of 3,620 feet amsl and the minimum recreation pool (1,100 AF) from May 1 through September 30 is at an elevation of approximately 3,594 feet amsl (Figure 4). Transfer of 2,000 AF, in combination with the minimum required stream flow (5 cfs), and Foresthill PUD customer demand (1,000 AF) would result in a reservoir surface elevation just above 3,595 feet amsl during a dry year as shown in Figure 4 and documented in Appendix A. It should be noted that the reservoir would not fall below the minimum recreation pool elevation during or following the transfer in a dry year. The volume of water made available under the Proposed Action is within the permitted water right and is currently physically available. Therefore, the Proposed Action would not substantially affect water supply availability at or from Sugar Pine Reservoir.

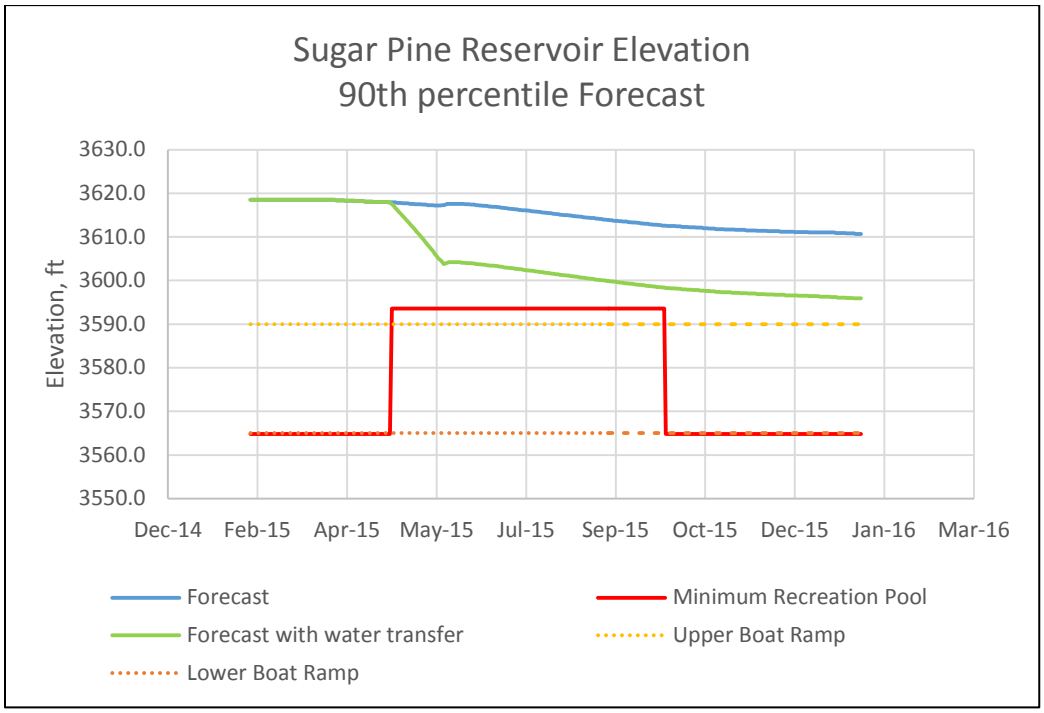


Figure 4. Sugar Pine Reservoir Elevation 90th Percentile Forecast

North Fork American River
Natural flows for the North Fork American River during 2013 averaged daily for the year, were approximately 543 cfs (USGS 2015). The minimum and maximum flow rates per day on the North Fork American River would remain the same under the No Action Alternative. Under the Proposed Action the flow rate would increase temporarily at a maximum rate of 34 cfs in the month of May 2015, however, the rate would not be significant relative to the natural flows of the North Fork American River.

Folsom Reservoir and Dam
Under the Proposed Action, Folsom Reservoir storage increase would be imperceptible to most users due to the size of the transfer relative to the size of the reservoir. The transfer volume is 2,000 AF while the reservoir capacity is 976,000 AF. The transferred water would be released from Folsom Reservoir into Lake Natoma, which is impounded by Nimbus Dam and serves as the re-regulating afterbay for Folsom Reservoir. Compared to the No Action Alternative, a small temporary increase in reservoir storage and cold water pool resources would occur under the Proposed Action, water supply availability for CVP customers would not be decreased, and there would be no effect to CVP customers (Reclamation 2009b).

Lake Natoma, Nimbus Dam, Lower American River, Sacramento River, and Delta
Under the Proposed Action, the transfer water would be released at a steady rate over 3 months at approximately 11.5 cfs higher than flows expected under the No Action Alternative, during the period beginning July 1 through September 30, 2015, from Nimbus Dam into the Lower American River, and subsequently would flow into the Sacramento River and the Delta (Reclamation 2014). These increased flows would be imperceptible compared to the No Action Alternative.

3.2 Water Quality

Water quality parameters address potential water quality problems (i.e. impairments of beneficial uses or deterioration of water quality).Water quality problems are typically attributed to the intensity and type of past and present activities of primary discharge sources and the volume, quality, and uses of the receiving waters affected by the discharges (CVRWQCB 2011) of pollutants such as pesticides, heavy metals, nutrients, temperature, pathogens, sediment, pathogens, salinity, organics, inorganics, and toxicity. Water quality for each section within the Proposed Action Area is discussed below.

3.2.1 Affected Environment

Sugar Pine Reservoir and North Shirttail Canyon Creek
Sugar Pine Reservoir is approximately 2.5 miles below the headwaters of North Shirttail Canyon Creek, resulting in good water quality entering the reservoir. Historical mining in the area was not extensive enough to cause a positive result

for mercury (White 2015), which is a water quality issue in other parts of the American River watershed. Otherwise, there are no known dischargers on North Shirttail Canyon Creek. Urbanization is minimal due to most of the watershed being managed by the U.S. Forest Service (USFS), and only a few road crossings exist within the North Shirttail Canyon Creek watershed.

North Fork American River

Water quality in the North Fork American River is considered to be good and meets required water quality objectives and standards for suitable beneficial uses with the exception of mercury (SWRCB 2010). Historical mining activities have produced a water quality issue due to mercury that places this water body on the impaired waterbodies list (SWRCB 2010).

Minimal urbanization has occurred within the watershed that could be a source of water quality degradation. In addition, there are no active landfills or municipal wastewater systems permitted to discharge treated effluent into this reach. PCWA conducted a comprehensive water quality and temperature monitoring program in 2007 in the Middle and North Fork American rivers. All constituents sampled met regulatory criteria or were within the expected ranges for the criteria that do not have established objectives. Turbidity measures were low (<0.6 NTU), indicating the river carries relatively little sediment or other suspended organic matter during low flows. Historic water quality data from the 1960s to 1980s collected by the United States Geological Survey (USGS), SWRCB, and Reclamation from the North Fork American River indicate that generally all the constituents analyzed complied with current regulatory standards (Reclamation 2014).

Folsom Reservoir and Lake Natoma

Water discharged from the North Fork American River into Folsom Reservoir and Lake Natoma is considered high quality with the exception of mercury (SWRCB 2010) and seldom exceeds the State of California's water quality objectives due to the relatively undeveloped North Fork American River Watershed (Folsom 2006). Beneficial uses currently defined for these water bodies include M&I water, irrigation, industrial power, water contact and non-contact recreation, warm and cold freshwater habitat, warm freshwater spawning habitat, and wildlife habitat, along with potential beneficial uses for industrial service supply (Folsom 2006). Water quality parameters including temperature, toxic metals concentrations, pH, turbidity, dissolved oxygen (DO), total organic carbon (TOC), nitrogen, phosphorus, electric conductivity, total dissolved solids (TDS), and fecal coliform generally do not exceed recommended limits (Reclamation 2014; LSA 2003). The allowable fecal coliform bacteria levels assigned to Folsom Reservoir in the Basin Plan are half of the allowable levels of other waters in the region that are designated for water contact recreation (LSA 2003).

In general, water quality in Folsom Reservoir and Lake Natoma is acceptable to meet these beneficial uses. However, reports of changes in taste and odor have occurred in municipal water supplies diverted from Folsom Reservoir. Blue-green

algae blooms that periodically occur in the reservoir as a result of elevated water temperatures during late summer have been identified as the source of the diminished water quality (Reclamation 2014; Folsom 2006).

Lower American River

Water quality parameters of concern (i.e. pathogens, nutrients, TDS, TOC, priority pollutants, and turbidity) for the Lower American River are typically affected by urban development and associated runoff, and storm water discharges. TOC and TDS levels in the river are relatively low in comparison to other waterbodies such as the Sacramento River and the Delta (Reclamation 2014). Water quality parameters for the Lower American River have generally been within acceptable limits to achieve water quality objectives and beneficial uses identified for this waterbody (Reclamation 2014).

Although heavy metal concentrations in the river are generally within the range of drinking water standards, SWRCB has listed segments of the Lower American River as impaired waters due to mercury, PCBs, and other unknown toxicity (SWRCB 2010). In addition, reports of changes in taste and odor have occurred in the Lower American River during late summer. Elevated summer temperatures have been attributed to increased concentrations of bacteria, specifically an actinomyces microorganism that has been identified as the source of the problem (Reclamation 2014; SWRCB 2015).

Sacramento River

The Sacramento River is a major component to the CVP water supply, which delivers water downstream to urban development and agricultural lands (Reclamation 2014). Several segments of the Sacramento River have been listed as impaired waters, particularly at the confluences between the Sacramento River and Feather River and the Sacramento River and the Delta (Reclamation 2014). Pollutants identified along the Sacramento River (Knights Landing to the Delta) include pesticides (chlordane, dichlorodiphenyltrichloroethane [DDT], and dieldrin), heavy metal concentrations of mercury, polychlorinated biphenyls (PCBs), and unknown toxicity (SWRCB 2010).

Storm water and urban runoff is discharged into the Lower Sacramento River, either directly or indirectly (through tributary inflow), from the cities of Sacramento, Roseville, Folsom, and smaller surrounding communities. Directly upstream of the American River and Sacramento River confluence, the Natomas East Main Drainage Canal discharges to the American River transferring both agricultural and urban runoff into the Sacramento River (Reclamation 2014).

Sacramento-San Joaquin Delta

Water quality parameters of concern in the Delta generally include pH, metals (mercury and selenium), pesticides (chlordane, DDT, and dieldrin), other organics (dioxin, furan, and PCBs), nutrient enrichment and associated eutrophication, parameters associated with suspended sediments and turbidity, and those parameters of specific concern to drinking water including salinity, bromide, and

organic carbon (Reclamation 2014; SWRCB 2010). The Delta is the source of drinking water for more than 25 million Californians located in the San Francisco Bay area, Central Valley, Central Coast, and Southern California regions. Extended periods of reverse flow have been shown to contribute to increased levels of salinity, potentially causing adverse effects to water quality in the Delta and export pumps. CVP and SWP currently offset this effect by increasing Delta outflow to reduce salinity levels (Reclamation 2014).

3.2.2 Environmental Consequences

No Action

Under the No Action Alternative, no additional flow from Sugar Pine Reservoir would be released, resulting in no change to the current conditions. There would be no benefit to the Folsom Reservoir cold water pool or the water quality in the facilities mentioned below under the Proposed Action.

Proposed Action

The analysis of potential changes in water quality associated with the proposed water transfer within the North Fork American River Basin was based on the temporary increase in flow and the end-of-month reservoir storage at Folsom Reservoir, that could contribute to the cold water pool and increased water quality in Folsom Reservoir, Lake Natoma, the Lower American River, and the Sacramento River.

Sugar Pine Reservoir and North Shirttail Canyon Creek

The volume of flow in North Shirttail Canyon Creek during the time of release from Sugar Pine Reservoir would temporarily increase. The higher flows in the creek and the lower storage level of the reservoir would not result in an increase in the concentration of contaminants or a decrease in water quality in North Shirttail Canyon Creek.

North Fork American River

The volume of flow in the North Fork American River during the time of release would temporarily increase under the Proposed Action. The higher flows in the North Fork American River would not result in an increase in the concentration of contaminants or a decrease in water quality in the river downstream of the confluence with North Shirttail Canyon Creek.

Folsom Reservoir and Lake Natoma

Reservoir storage would not decrease under the Proposed, resulting in no degradation to the water quality in Folsom Reservoir and Lake Natoma. The increase in the cold water pool and reservoir storage, although minor, would be beneficial and would not degrade the water quality in Folsom Reservoir and Lake Natoma under the Proposed Action.

Lower American River
The additional 2,000 AF of water that would be released from Folsom Reservoir by the Proposed Action would be released steadily during a three-month period (July 1 through September 30) as mentioned in Section 2.2.1. The slight increase in flow would not degrade or adversely change the water quality in the Lower American River below Nimbus Dam. Augmenting Folsom Reservoir's cold water pool with 2,000 AF would help Reclamation meet temperature objectives, protect aquatic fishery resources and critical habitat in the lower American River, and enhance water quality in the Delta.

Sacramento River
The Proposed Action would not significantly change the flows in the Sacramento River (below the confluence with the Lower American River). Therefore, the Proposed Action would not affect water quality in the Sacramento River.

Sacramento-San Joaquin Delta
The SWRCB D-1641 requires the implementation of the 2006 Bay-Delta Water Quality Control Plan, in which DWR and Reclamation are responsible for mitigating water quality effects. On January 23, 2015, DWR and Reclamation jointly filed a Temporary Urgency Change Petition pursuant to Water Code section 1435 et seq., to temporarily modify requirements in the water right permits and license for the SWP and CVP (collectively Projects) for the next 180 days, with specific requests for February and March of 2015 (SWRCB 2015).

There would be no change in the ability of CVP or SWP to meet D-1641 standards (Appendix D) under the Proposed Action. The ability of DWR and Reclamation to meet the 2006 Bay-Delta Water Quality Control Plan objectives would not be compromised and actions in the May 2, 2014 SWRCB order would only apply to contract supply delivery. No changes to water quality would occur as a result of the Proposed Action (Reclamation 2014).

3.3 Terrestrial and Riparian Resources

3.3.1 Affected Environment

The following section describes the existing biological resources within the Proposed Action Area including terrestrial plant and wildlife communities, and special-status species potentially occurring in the action area. Special-status species include those listed pursuant to the Federal Endangered Species Act (FESA) and California Endangered Species Act (CESA) consisting of endangered or threatened species, candidate FESA and CESA species, and species of concern.

Sugar Pine Reservoir and North Shirttail Canyon Creek
Sugar Pine Reservoir and segments of North Shirttail Canyon Creek, supports a variety of plant communities including coniferous forest, montane hardwood, chaparral, blue oak woodland, annual grassland, riparian, montane riverine

aquatic, freshwater emergent wetlands, and ruderal (disturbed) or barren areas (Placer County CDRA 2007).

Seven special-status plants and nine terrestrial wildlife species have been identified as potentially occurring within 10 miles of Sugar Pine Reservoir, including North Shirttail Canyon Creek (CDFW 2013). Special-status plants include Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*), Butte County fritillary (*Fritillaria eastwoodiae*), felt-leaved violet (*Viola tomentosa*), saw-toothed lewisia (*Lewisia serrata*), Sheldon's sedge (*Carex sheldonii*), Sierra blue grass (*Poa sierrae*), and scadden flat checkerbloom (*Sidalcea stipularis*). Special-status terrestrial wildlife species include gold rush hanging scorpionfly (*Orobittacus obscurus*), Shirttail Creek stonefly (*Megaleuctra sierra*), California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylii*), Sierra Nevada yellow-legged frog (*Rana sierra*), coast horned lizard (*Phrynosoma coronatum*), California spotted owl (*Strix occidentalis occidentalis*), Sierra Nevada red fox (*Vulpes vulpes necator*), and fisher (*Martes pennanti*) (CDFW 2013).

The variety of existing plant communities support habitat for special-status mammal and bird species thus providing shelter, foraging, nesting, and breeding habitat. In addition, creeks, streams, and open water as well as adjacent annual grassland and seasonal wetlands provide habitat for special-status amphibians found throughout the FHDCP area (Placer County CDRA 2007).

North Fork American River

Plant communities found within the North Fork American River corridor are predominately riparian communities dominated by alder-willow riparian (Reclamation 2014). Riparian vegetation is relatively undisturbed from the North Fork American River to the confluence of the Middle Fork American River. However, riparian vegetation downstream of the confluence is highly disturbed and is characterized by unstable slopes and rock outcrops, which are largely devoid of vegetation (Reclamation 2014). In addition to the riparian vegetation communities, three types of woodland occur in this area including live oak woodland, mixed evergreen forest, and foothill woodland, as well as various wetland habitats (Placer County 2007).

Wildlife species are numerous and at least 47 species of mammals, 238 birds, 10 amphibians, and 20 species of reptiles are supported by the American River Canyon habitats including similar species found in the vicinity of Sugar Pine Reservoir and North Shirttail Canyon Creek (refer to previous section above) (Reclamation 2014).

Several special-status plant species potentially occurring along the North Fork American river include similar species found in the vicinity of Sugar Pine Reservoir and North Shirttail Canyon Creek such as Brandegee's clarkia, Butte County fritillary, saw-toothed lewisia, and Red Hills soaproot (*Chlorogalum grandiflorum*) (Reclamation 2014). Special-status terrestrial wildlife species

potentially occurring, but not limited to, the North Fork American River, include California red-legged frog, foothill yellow-legged frog, yellow warbler (*Setophaga petechia*), California spotted owl , northern goshawk (*Accipiter gentilis*), bald eagle (*Haliaeetus leucocephalus*), willow flycatcher (*Empidonax traillii*), Townsend's bat (*Corynorhinus townsendii*), western red bat (*Lasiurus blossevillii*), mule deer, American (Sierra) marten (*Martes americana*), and ringtail (*Bassariscus astutus*) (Reclamation 2014).

Folsom Reservoir Lake Natoma, and Nimbus Fish Hatchery

Plant communities found in proximity to Folsom Reservoir and Lake Natoma include non-native annual grassland, blue oak woodland/savanna, interior live oak woodland, chamise chaparral, cottonwood/riparian woodland, freshwater marsh, northern claypan and northern hardpan vernal pools, and seasonal wetlands (DPR 2007; Reclamation 2014). Vegetation is absent within the lake shoreline fluctuation zones, with the exception of willow shrubs (*Salix* spp.) and non-native grasses including wild oat (*Avena fatua L.*), ripgut brome (*Bromus diandrus*), and Italian rye grass (*Festuca perennis*). Ruderal and barren areas occur where human activity has heavily impacted vegetation along roadsides, boat-launch aprons, and camping and picnic areas (DPR 2007; Reclamation 2014).

These plant communities provide habitat for a variety of terrestrial wildlife including common reptile and amphibian species such as western fence lizard (*Sceloporus occidentalis*), California whipsnake (*Masticophis lateralis*), and western rattlesnake (*Crotalus viridis*); bird species including western scrub-jay (*Aphelocoma californica*), American goldfinch (*Spinus tristis*), red-tailed hawk (*Buteo jamaicensis*), and turkey vulture (*Cathartes aura*); and numerous mammal species such as bobcat (*Lynx rufus*), coyote (*Canis latrans*), and mule deer found in the oak woodland (DPR 2007).

Several special status plants and animals potentially occur in the vicinity of Folsom Reservoir and Lake Natoma. Special-status plant species that potentially occur in the vicinity include Jepson's onion (*Allium jepsonii*), big-scale balsamroot (*Balsamorhiza macrolepis var. macrolepis*), Parry's horkelia (*Horkelia parryi*), Hartweg's golden sunburst (*Pseudobahia bahifolia*), and Boggs Lake hedge-hyssop (*Gratiola heterosepala*) (Reclamation 2014). Special-status terrestrial wildlife species that potentially occur within the vicinity include the valley elderberry longhorn beetle, California red-legged frog, mountain yellow-legged frog, pallid bat, northwestern pond turtle (Actinemys marmorata), tricolored blackbird (*Agelaius tricolor*), bald eagle, California black rail (*Laterallus jamaicensis coturniculus*), and purple martin (*Progne subi*) (Reclamation 2014).

Lower American River

The dominant plant community within the Lower American River is riparian, characterized as Fremont cottonwood and willow riparian forest. Other plant communities, however, include freshwater marsh and emergent wetland, riparian scrub, oak woodland, and non-native grassland (Reclamation 2014; Sacramento County 2008). In addition, and due to recent human disturbances, areas of non-

native vegetation occur in adjacent areas along the river. These disturbed areas are generally associated with fallow and active agricultural fields, borrow pits, dredger mine tailings, levee slopes, and areas subject to periodic fire, frequent flood inundation, or scour occur along the Lower American River (Sacramento County 2008).

The Lower American River supports a variety of terrestrial wildlife species. More than 220 species of birds and 30 species of mammals exist within the river corridor (Reclamation 2014). In addition, the riparian forests support numerous amphibian and reptile species, the most common include western toad (*Bufo boreas*), Pacific tree frog (*Hyla regilla*), bullfrog (*Rana catesbeiana*), western pond turtle (*Clemmys marmorata*), western fence lizard, common garter snake (*Thamnophis sirtalis*), and gopher snake (*Pituophis catenifer*) (Reclamation 2014).

Many of the special-status plant species potentially occurring in the vicinity of Folsom Reservoir and Lake Natoma also occur in the vicinity of the Lower American River including, but not limited to, valley elderberry longhorn beetle, western pond turtle, bald eagle, bank swallow (*Riparia riparia*), and Western burrowing owl (*Athene cunicularia*) (Reclamation 2014). Additional species that may occur in the vicinity of the Lower American River include giant garter snake (*Thamnophis gigas*), Swainson's hawk (*Buteo swainsoni*), and yellow-billed cuckoo (*Coccyzus americanus*).

Sacramento River

The Sacramento River within the Proposed Action Area is identified as the segment of the Sacramento River from Princeton to the Delta near Chipps Island (Reclamation 2014). Levees were constructed directly adjacent to the river spanning approximately 60 miles from the Sacramento River and Lower American River confluence to Collinsville. Plant communities are generally absent along the levees, with the exception of single rows of Fremont cottonwood, sycamore, or willow trees. The levees are generally bordered by agricultural land consisting of rice, dry grains, pastures, orchards, and row crops (Reclamation 2014).

Common terrestrial wildlife species found within the Sacramento River include mammals such as the North American river otter (*Lontra canadensis*) and muskrat (*Ondatra zibethicus*), which utilize riverine habitats for foraging and cover (Reclamation 2014). Freshwater/emergent wetlands provide habitat for numerous amphibians and some reptiles such as northwestern pond turtle, American bullfrog (*Lithobates catesbeianus or Rana catesbeiana*), and Pacific tree frog (*Pseudacris regilla*). Agricultural land adjacent to the river levees provides foraging habitat for various raptor species such as red-tailed hawk (Reclamation 2014).

Special-status plant and terrestrial wildlife species potentially occurring in the vicinity of the Lower Sacramento River are similar to those previously described

for the Folsom Reservoir/Lake Natoma and Lower American River (see descriptions above).

Sacramento-San Joaquin Delta

The Sacramento-San Joaquin Delta (Delta) was formerly a large tidal freshwater marsh, located at the confluence of the Sacramento and San Joaquin Rivers. Levees were built in the 1800s to allow draining of the marsh for agricultural development. Today the Delta is comprised of 57 separate "islands" bound by water. Plant communities are limited, consisting of primarily agricultural fields adjacent to ruderal non-native grasslands (Reclamation 2014). Native plant communities include some marginal riparian vegetation, brackish and freshwater marshes, and emergent marsh, which provide important habitat for many resident and migratory wildlife species (Reclamation 2014).

Common terrestrial wildlife species known to occur within the Delta include, but are not limited to, coyote, muskrat, North American river otter, Great egret (*Casmerodius albus*), Least sandpiper (*Erolia minutilla*), Northern harrier (*Circus cyaneus*), red-tailed hawk, and western pond turtle (Sacramento County 2011).

Potentially occurring special-status plant species in the vicinity of the Bay Delta include, but are not limited to, Boggs Lake hedge-hyssop, Sanford's sagittaria (*Sagittaria sanfordii*), Mason's lilaeopsis (*Lilaeopsis masonii*), and rose mallow (*Hibiscus lasiocarpus*). Potentially occurring special-status terrestrial wildlife species in the vicinity of the Bay Delta are similar to those described for the Lower American and Sacramento Rivers, as previously described. Species include, but are not limited to, valley elderberry longhorn beetle, California red-legged frog, northwestern pond turtle, giant garter snake, tricolored blackbird, Swainson's hawk, and northern harrier (Reclamation 2014).

3.3.2 Environmental Consequences

No Action

No change in riparian or terrestrial resources would occur under the No Action Alternative. Therefore, there would be no adverse impacts on terrestrial and riparian resources within the Action Area.

Proposed Action

The analysis of potential effects on plants and terrestrial wildlife species associated with the Proposed Action was based on changes in reservoir storage or river flows of adequate scale to adversely affect plants and terrestrial wildlife species and potentially occurring special-status species (including direct loss of individuals or habitat loss). Biological resources potentially affected by the Proposed Action include plant and terrestrial wildlife species, including special-status species, and their associated habitats that occur within the inundation areas of the reservoirs or are supported by flows within the Proposed Action Area.

As described in Section 3.1.2, the full reservoir mark is at an elevation of 3,620 feet amsl and the minimum recreation pool from May 1 through September 30 is at an elevation of approximately 3,594 feet amsl (Figure 4). The water transfer of 2,000 AF, in combination with the minimum required streamflow (5 cfs), and FPUD customer demand (1,000 AF) would result in a reservoir surface elevation just above 3595 feet amsl, during a dry year as shown in Figure 4 and documented in Appendix A. There is no established riparian vegetation below the full reservoir mark in Sugar Pine Reservoir and the magnitude of the flow changes in North Shirttail Canyon Creek and reservoir water surface elevation changes in Sugar Pine Reservoir under the Proposed Action would not affect plants and terrestrial wildlife species, special-status species, geomorphic processes or impact riparian growth.

The changes in flow within North Shirttail Canyon Creek would not increase water flows to above normal seasonal fluctuations in May as described in Section 3.1.2 and would not adversely affect environmental conditions for plants and terrestrial wildlife species, including special-status species. The increase in flows may provide minor benefits to riparian vegetation and species that are supported by riparian habitats during this extremely dry year.

The conveyance flows between North Shirttail Canyon Creek and Folsom Reservoir are expected to have a diminutive effect on plants and wildlife species; considering that the proposed maximum increase of 34 cfs into the North Fork American River would occur in May during spring run-off when average daily flows in the North Fork American River between the confluence with North Shirttail Canyon Creek and Folsom Reservoir range between 1,200 and 1,900 cfs (USGS 2015). The nominal increase in the overall flows in this reach of the North Fork American River would not create fluctuations in flows beyond current minimum and maximum ranges, and would thereby not affect the current baseline conditions for plant and wildlife species in this reach.

Similarly, the July through September releases from Folsom Reservoir would be nominal and would not create fluctuations in flows beyond current minimum and maximum ranges, and would thereby not affect the current baseline conditions for plant and wildlife species downstream of Folsom Reservoir/Nimbus Dam. The transfer water is approximately 0.2% of the 976,000 AF of Folsom Reservoir's storage capacity (Reclamation 2009b). If the transfer water was released from Folsom Reservoir steadily over the time period beginning July 1 through September 30, 2015, the flow rate would increase by approximately 11 cfs. This amount of water would not be noticeable within the large storage and flow volumes of Folsom Reservoir, Lake Natoma, Lower American River, Sacramento River or the Delta.

Additionally, there would be no significant adverse effects due to the temporary increase in flows to special-status aquatic species including the Shirttail Creek stonefly, foothill yellow-legged frog, and red-legged frog that have potential to occur within North Shirttail Canyon Creek near the vicinity of Sugar Pine

Reservoir. Additionally, the water transfer would occur prior to the foothill yellow-legged frog and red-legged frog breeding season and after the Shirttail Creek stonefly has completed all critical life stages essential to population persistence.

3.4 Fisheries and Aquatic Resources

3.4.1 Affected Environment

Species of primary management concern include those that are recreationally or commercially important (fall-run Chinook salmon [*Oncorhynchus tshawytscha*], steelhead [*Oncorhynchus mykiss*], American shad [*Alosa sapidissima*], and striped bass [*Morone saxatilis*]); Federal- and/or State-listed species within the Action Area (winter- and spring-run Chinook salmon, steelhead, delta smelt [*Hypomesus transpacificus*], and green sturgeon [*Acipenser medirostris*]); and State species of special concern (late fall-run Chinook salmon, green sturgeon, hardhead [*Mylopharodon conocephalus*], longfin smelt [*Spirinchus thaleichthys*], river lamprey [*Lamptera ayresi*], Sacramento perch [*Archoplites interruptu*], Sacramento splittail [*Pogonichthys macrolepidotus*], and California roach [*Hesperoleucus symmetricus*]).

Special emphasis is placed on these species of primary management concern to facilitate compliance with the State and Federal ESAs. Table 1 lists the special-status fish species potentially occurring within the Action Area. This focus is consistent with: (1) CALFED's 2000 Ecosystem Restoration Program Plan and Multi-Species Conservation Strategy; (2) the programmatic determinations for the CALFED program, which include CDFW's Natural Community Conservation Planning Act approval and the 2009 NMFS, 2009 USFWSBO; (3) USFWS's 1997 Draft Anadromous Fish Restoration Program (AFRP) which identifies specific actions to protect anadromous salmonids; (4) CDFW's 1996 Steelhead Restoration and Management Plan for California, which identifies specific actions to protect steelhead; and (5) CDFW's Restoring Central Valley Streams, A Plan for Action (1993), which identifies specific actions to protect salmonids.

Table 1. Special-Status Fish Species within the Action Area

Common Name	Scientific Name	Status*	Location
Central Valley fall-/late fall-run Chinook salmon	*Oncorhynchus tshawytscha*	CSC	Lower American River, Sacramento River, and the Delta
Central Valley spring-run Chinook salmon	*Oncorhynchus tshawytscha*	T, ST	Lower American River, Sacramento River, and the Delta
Central Valley winter-run Chinook salmon	*Oncorhynchus tshawytscha*	E, SE	Sacramento River and the Delta
Central Valley steelhead	*Oncorhynchus mykiss*	T	Lower American River, Sacramento River, and the Delta
Delta smelt	*Hypomesus transpacificus*	T, ST	Delta

Common Name	Scientific Name	Status*	Location
Southern Distinct Population Segment of North American green sturgeon	*Acipenser medirostris*	T, CSC	Sacramento River and the Delta
Hardhead	*Mylopharodon conocephalus*	CSC	Lower American River and Sacramento River
Longfin smelt	*Spirinchus thaleichthys*	CSC	Delta
River lamprey	*Lampetra ayresi*	CSC	Lower American River, Sacramento River, and the Delta
Sacramento perch	*Archoplites interruptus*	CSC	Sacramento River and the Delta
Sacramento splittail	*Pogonichthys macrolepidotus*	CSC	Lower American River, Sacramento River, and the Delta
California roach	*Hesperoleucus symmetricus*	CSC	Lower American River and Sacramento River

Status Key*

E = Endangered Officially listed (in the Federal Register) as being endangered

T = Threatened Federally listed as likely to become endangered within the foreseeable future

SE = State Endangered State listed as endangered

ST = State Threatened State listed as likely to become endangered

CSC = State Species of Special Concern CDFW species of special concern

Source: Reclamation 2014

Sugar Pine Reservoir and North Shirttail Canyon Creek

Fish species that have been observed in North Shirttail Canyon Creek include hitch (*Lavina exillicauda*), hardhead (*Mylopharodon conocephalus*), Sacramento pike minnow (*Ptychocheilus grandis*), and rainbow trout (*Onchorynchis mykiss*) (CWF 2008). Recreational fish species including rainbow and brown trout (*Salmo trutta*), black bass (*Micropterus* ssp.), and green sunfish (*Lepomis cyanellus*) are found in Sugar Pine Reservoir (Reclamation and USFS 2003).

No special-status species are documented to occur in Sugar Pine Reservoir (CDFW 2013), however hardhead, a California species of concern, has been found in North Shirttail Canyon Creek (Conservation 2008).

North Fork American River

Warm water fish including smallmouth bass (*Micropterus dolomieu*), Sacramento pikeminnow (*Ptychocheilus grandis*), Sacramento sucker (*Catostomus occidentalis*), riffle sculpin (*Cottus gulosus*), brown bullhead (*Ictalurus nebulosus*), and green sunfish reside year-round in the North Fork American River, located downstream of the confluence with the Middle Fork American River (Reclamation 2014). Typically, warm water species have wider thermal tolerance ranges and habitat preferences than salmonids and other cold water species. For example, warm water species such as Sacramento pikeminnow and Sacramento sucker are generally found in low- to mid-elevation streams and

rivers with deep pools, long runs, undercut banks, and overhanging vegetation (Reclamation 2014).

In general, temperatures are too warm for spawning and early-life stage rearing of cold water species to occur in the North Fork American River downstream of the confluence, although some rainbow trout and brown trout are still present (Reclamation 2014). Quality riverine habitat for trout consists of cool to cold water, silt-free rocky substrate, and relatively stable water flow and temperature (Reclamation 2014). The majority of trout that do occur are considered to be transitory downstream adult and/or sub-adult migrants that have migrated from upstream habitats (Reclamation 2014).

No special-status fish species are reported to occur in the North Fork American River (Reclamation 2014).

Folsom Reservoir

Folsom Reservoir provides flood control, hydroelectricity, drinking water and water for irrigation, and releases of water from Folsom Dam can vary greatly to meet changing demands for water and power. Folsom Reservoir supports a stratified fishery habitat from April through November where the warm epilimnion (or warm water layer) provides habitat for warm water fishes and the reservoir's lower metalimnion and hypolimnion (or cold water layer) form a "cold water pool" that provides habitat for cold water fish species (Reclamation 2014).

Common native species that occur in the Folsom Reservoir include hardhead and Sacramento pikeminnow, as well as introduced non-native species including largemouth bass (*Micropterus salmonids*), smallmouth bass, spotted bass (*Micropterus punctulatus*), bluegill (*Lepomis macrochirus*), black and white crappie (*Pomoxis nigromaculatus* and *P. annularis*), and catfish (*Ictalurus* spp. and *Ameiurus* spp.), which comprise the predominant warm water sport fisheries of Folsom Reservoir (Reclamation 2014). Cold water sport species are also present in the reservoir and are currently, or have been, stocked by CDFW. These species include rainbow and brown trout, kokanee salmon (*Oncorhynchus nerka*), and Chinook salmon (Reclamation 2014). These cold water salmonid species are stream spawning, and likely spawn upstream in the North Fork American River (Reclamation 2014).

Seasonal releases from the Folsom Reservoir's cold water pool provide important thermal conditions in the Lower American River that support annual in-river reproduction of fall-run Chinook salmon and Central Valley steelhead (Reclamation 2014). However, Folsom Reservoir's cold water pool is limited in availability as it is not large enough to facilitate cold water releases during the summer months to provide the optimal temperature for over-summering juvenile Central Valley steelhead developing in the Lower American River (see discussion below). In order to compensate for limited cold water pool availability, Folsom Reservoir is managed on an annual basis, typically scheduling cold water pool releases during October and November to increase the quality of thermal

conditions to benefit fall-run Chinook salmon immigration, spawning, and embryo incubation (Reclamation 2014).

As described above, special-status fish species potentially occurring within Folsom Reservoir include hardhead, and seasonal releases from the Folsom Reservoir's cold water pool provide important thermal conditions in the Lower American River that support annual in-river reproduction of fall-run Chinook salmon and Central Valley steelhead (Reclamation 2014).

Lake Natoma

Lake Natoma is a regulating afterbay for Folsom Reservoir, located approximately 132 feet amsl. Although relatively small in size (operational range of 2,800 AF), Lake Natoma can influence the temperature of water flowing through it due to high residence times in the lake, especially during the summer months, which have a warming effect on water released from Folsom Reservoir (Reclamation 2014).

Similar fish species that are found in Folsom Reservoir (rainbow trout, bass, green sunfish, and catfish) are also found in Lake Natoma, many of which likely originate from the reservoir or are stocked by CDFW (Reclamation 2014). However, colder epilimnetic water temperatures (relative to Folsom Reservoir) and daily elevation fluctuations are a few of the environmental factors that contribute to reduced size and annual production of fish populations in Lake Natoma (Reclamation 2014).

Nimbus Fish Hatchery

The Nimbus Salmon and Steelhead Hatchery is operated by CDFW, under contract with Reclamation and the American River Trout Hatchery. Both of these hatcheries, which produce anadromous fall-run Chinook salmon and steelhead, and non-anadromous rainbow trout, respectively, are located at the same facility directly downstream of Nimbus Dam (Reclamation 2014). Annually there are close to four million salmon produced by the Nimbus Hatchery that are trucked and released into the Delta Estuary. Central Valley steelhead are released into the Sacramento River at either Miller Park or Garcia Bend, and trout are stocked in various water bodies throughout the region (Reclamation 2014). Water temperatures in the hatchery are greatly influenced by the temperature of water redirected from Lake Natoma to Nimbus Fish Hatchery via a 60-inch- diameter pipeline. The temperature of the water redirected from Lake Natoma for hatchery operations is recurrently higher than the requirement for successful hatchery production of salmonids. In order to attain more desirable conditions, increasing releases at Folsom Dam and/or releasing cold water from a lower elevation within the reservoir may result in more suitable temperatures. However, due to Folsom Reservoir's limited cold water pool, it is essential that hatchery operations are timed appropriately for seasonal in-river benefits that result from such releases (Reclamation 2014).

Lower American River

The Lower American River supports numerous resident native and introduced fish species, including several anadromous fish species (Reclamation 2014). A total of

at least 43 species of fish occur in the Lower American River, however only a select few require close management attention due to population decline or because of their importance as a recreational and/or commercial fish (Reclamation 2014). As described previously, Central Valley steelhead is one of these species since it is listed as "threatened" pursuant to the FESA. Other important recreation/commercial fish species include Central Valley fall-run and spring-run Chinook salmon, striped bass, American shad, and Sacramento splittail (*Pogonichthys macrolepidotus*). The Lower American River supports a mixed run of hatchery and naturally produced fish, providing spawning and rearing habitat for fall-run and spring-run Chinook salmon and Central Valley steelhead below the Nimbus Dam (Reclamation 2014).

Potentially occurring special-status fish species within the Lower American River include Hardhead, River lamprey (*Lampetra ayresi*), Sacramento splittail, California roach (*Hesperoleucus symmetricus*), Central Valley steelhead, spring-run Chinook salmon, and fall-run/late-fall-run Chinook salmon.

Sacramento River

The Lower Sacramento River aquatic habitat is generally described as slow-water glides and pools with low water clarity and little habitat diversity. More than 30 fish species, resident and anadromous cold- and warm water, are known to occur in the Sacramento River. Many of these species' survival are contingent upon river flows carrying their larval and juvenile life stages to downstream nursery habitats (Reclamation 2014). Native and non-native introduced warm water fish species predominantly use the lower Sacramento River for spawning and rearing. Anadromous fish species also use the lower river for rearing to some extent; however, it is mostly utilized as an immigration route to upstream spawning habitats and an emigration route to the Delta (Reclamation 2014). Anadromous native and non-native introduced species include Chinook salmon, Central Valley steelhead, green and white sturgeon, striped bass and American shad (Reclamation 2014). Other common fish species found in the Sacramento River include Sacramento splittail and striped bass, as well as resident fish species such as rainbow and brown trout, largemouth and smallmouth bass, channel catfish, sculpin, Sacramento pikeminnow, Sacramento sucker, hardhead, and common carp (*Cyprinus carpio*) (Reclamation 2014).

Special-status aquatic species potentially occurring in the Sacramento River include Sacramento perch (*Archoplites interruptus*), Central Valley winter-run Chinook salmon, Central Valley fall-/late fall-run Chinook salmon, Central Valley spring-run Chinook salmon, and Southern Distinct Population Segment of North American green sturgeon (*Acipenser medirostris*).

Sacramento-San Joaquin Delta

The northern Delta, the most upstream portion of the Delta estuary and confluence of the Sacramento and San Joaquin Rivers, is a triangle-shaped area comprised of islands, river channels, and sloughs (Reclamation 2014). Covering a surface area of approximately 75 square miles, the Delta's tidally influenced

channels and sloughs support a number of resident freshwater fish and macro invertebrate species, as well as over 100 documented introductions of non-native, invasive species into the Delta estuary. The marsh plains and tidal channels regularly drain and fill with the ocean tide, allowing movement of fish. The inundation from ocean tides allows for an abundance of phytoplankton and zooplankton inshore, increasing foraging success for pelagic fish. These intertidal habitats are used as migration corridors between upstream freshwater riverine habitat and coastal marine waters and rearing grounds for anadromous fish, as well as spawning and rearing habitat for other estuarine species (Reclamation 2014).

Potentially occurring special-status fish species within the vicinity of the Delta include, but are not limited to, those anadromous fish species previously described with the addition of delta smelt (*Hypomesus transpacificus*) and longfin smelt (*Spirinchus thaleichthys*) (Reclamation 2014; DWR and Reclamation 2013).

3.4.2 Environmental Consequences

No Action

Under the No Action Alternative, the transfer would not occur. The No Action Alternative would not increase instream flow into North Shirttail Canyon Creek, North Fork American River and Lower American River (below Nimbus Dam), Folsom Reservoir, Lake Natoma, Sacramento River, and the Delta during the summer months of 2015 or change operations at CVP or SWP facilities. There would be no added cold water benefits in Folsom Reservoir and the Lower American River and no potential benefits or impacts to fisheries and aquatic resources including special-status species.

Proposed Action

The reduction in storage in Sugar Pine Reservoir and the temporary minor increase in storage in Folsom Reservoir are within the range of normal fluctuations of storage/water surface elevations that occur annually and would not significantly change the existing conditions. As described in Section 3.1.2, based on modeling conducted for the 90th percentile forecasted release which represents a dry year, the Proposed Action would increase streamflow below Sugar Pine Reservoir into North Shirttail Canyon Creek during May 2015 from 5 cfs (minimum streamflow requirement) to 39 cfs (minimum streamflow requirement of 5cfs plus 34 cfs associated with release of transfer water) (Appendix A). The temporary increase would not be significant relative to historic flows and would not increase water flows to above normal seasonal fluctuations in May as described in Section 3.1.2. The reduced levels in Sugar Pine Reservoir and increased flows in North Shirttail Canyon Creek would not adversely impact fisheries and other aquatic resources as they fall within normal operating conditions for Sugar Pine Reservoir and are within normal seasonal flow fluctuations in North Shirttail Canyon Creek.

The Proposed Action would not create a fluctuation in flows in the North Fork American River beyond current minimum and maximum ranges (Reclamation 2014), and fishery and aquatic resources are managed throughout the year to account for seasonal changes in river and reservoir conditions. Therefore, fishery and aquatic resources would remain unchanged (Reclamation 2014).

Furthermore, the proposed 2,000AF increase to Folsom Reservoir by June 1, 2015, from the North Fork American River may potentially benefit the cold water fishery habitat in Folsom reservoir (Reclamation 2014). Increases in cool metalimnetic water into Folsom Reservoir during the summer months and a blending of cold hypolimnetic water and cool metalimnetic water through powerhouse intakes would generate a temperature mechanism that may potentially allow greater flexibility in beneficial cold water releases to Lake Natoma, the Nimbus Fish Hatchery, and the Lower American River (Reclamation 2014). As such, the Proposed Action may potentially provide a biological benefit to the special-status salmonids in the river systems by contributing to cooler summer water temperatures but would not result in impacts to fisheries. However, this amount of water would not be noticeable within the large storage and flow volumes of Folsom Reservoir, Lake Natoma, Lower American River, Sacramento River or the Delta.

Due to the relatively small scale of the water transfer (2,000 AF released from Folsom Reservoir over a three-month period from July 1 through September 30) and the associated negligible effects related to changes in flows and reservoir elevations, the Proposed Action would not result in significant impacts to biological resources downstream of Folsom Reservoir.

3.5 Recreation

The following section briefly describes the existing recreation environment within the Proposed Action Area that would be affected.

3.5.1 Affected Environment

Sugar Pine Reservoir

Sugar Pine Dam and Reservoir are located within the Tahoe National Forest and are approximately 7.5 miles north of the town of Foresthill. This recreational resource provides opportunities for fishing, swimming, boating, camping, picnicking, hiking, biking, and wildlife viewing. The recreational use of the reservoir and the two adjacent campgrounds and picnic areas is managed by the USFS. This recreational spot also offers a trailer dump station, two boat ramps, and most facilities are designed for wheelchair accessibility (Recreation.gov 2014).

3.5.2 Environmental Consequences

No Action

Under the No Action Alternative the Foresthill PUD would not be able to provide water to SCVWD and recreation activities would not be affected.

Proposed Action

The transfer of 2,000 AF of water out of Sugar Pine Reservoir would not adversely affect the recreational facilities or the maintenance of the minimum water levels for recreation as discussed in Section 3.5 and defined in the water right and 1967 memorandum of agreement, the June 11, 1985 MOA between Reclamation and USFS, the June 8, 2000 agreement between Tahoe National Forest and FPUD, and the Special Use Permit issued by the USFS on August 19, 2003 (Appendix A; DFG 1967). The surface elevation of the reservoir would be lower and the exposed shoreline around the reservoir would be larger. Based on the 90th percentile model (Appendix A) during a dry year the reservoir could potentially be drawn down by 15 feet. However, at no time would Sugar Pine Reservoir fall below the minimum recreation pool elevation of 3,595 feet amsl and both boat ramps would be fully operational (see Figure 4). The water transfer amount in the Proposed Action would be replenished within two seasons (Appendix A). The Proposed Action would not cause a significant adverse effect on the recreational environment of Sugar Pine Reservoir or any recreational activities downstream.

3.6 Cumulative Impacts

According to the Council on Environmental Quality, the Code of Federal Regulations for implementing the procedural provisions of NEPA (40 CFR 1508.7 and 1508.25), a cumulative impact is defined as follows:

> *"A cumulative impact is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."*

The potential for the Proposed Action to result in cumulative impacts was analyzed using knowledge of previously approved and proposed actions related to and occurring within the region. The region is defined as the rivers, creeks, reservoirs, and water conveyance infrastructure associated with the Proposed Action. Cumulative impacts were determined based on the Proposed Action's potential to cumulatively contribute to impacts within the region.

Reclamation operates Folsom Reservoir to conserve Folsom's CVP, and to satisfy lower temperature and flow requirements in the Lower American River.

Reclamation's operational mandates are in place to meet temperature and flow standards to protect listed species and their critical habitats in the lower American River, and to enhance water quality in the Delta. Once these environmental conditions have been met, Reclamation then operates Folsom Reservoir to provide flood protection and to meet CVP water demands for the American River contractors. In years when excess capacity is available in Folsom and all operational priorities have been met, Reclamation can operate Folsom Reservoir to satisfy the storage and conveyance contracts for non-CVP water. Reclamation operates Folsom Reservoir within the existing BOs for the CVP/SWP; therefore, all storage and conveyance of non-CVP water in Folsom would be subject to the requirements set forth in the respective BOs.

The Proposed Action is a temporary WA contract which means that it would only be approved for a limited one-year timeframe, as specified. The Proposed Action, when added to other past, present, and reasonably foreseeable future actions, would not result in cumulative effects to the surrounding environment, Folsom Reservoir operations, water supply or hydropower.

The determination for cumulative effects was based on potential impacts associated to the Proposed Action; approval of a one-year temporary WA contract for storage and conveyance of up to 2,000 AF less 5% conveyance losses of non-CVP water through federal facilities from FPUD to SCVWD. Cumulative impacts associated to any future actions would be evaluated and updated to reflect the potential impacts to the affected environment.

Section 4 Consultation and Coordination

4.1 Public Review Period

Reclamation will provide the public and responsible public agencies with an opportunity to review and comment on the Draft Finding of No Significant Impact and Draft EA for 7 days between April 22 and April 29, 2015. A shortened public review period will be implemented due to the water transfer deadline of June 1, 2015.

All comments will be addressed in the Finding of No Significant Impact. Additional analysis will be prepared if substantive comments identify impacts that were not previously analyzed or considered.

4.2 National Historic Preservation Act (16 U.S.C. § 470 et seq.)

The NHPA of 1966, as amended (16 U.S.C. 470 et seq.), requires that federal agencies give the Advisory Council on Historic Preservation an opportunity to comment on the effects of an undertaking on historic properties, properties that are eligible for inclusion in the National Register. The 36 CFR Part 800 regulations implement Section 106 of the NHPA.

Section 106 of the NHPA requires federal agencies to consider the effects of federal undertakings on historic properties, properties determined eligible for inclusion in the National Register. Compliance with Section 106 follows a series of steps that are designed to identify interested parties, determine the APE, conduct cultural resource inventories, determine if historic properties are present within the APE, and assess effects on any identified historic properties (Appendix B).

4.3 Indian Trust Asset

An ITA is a legal interest in property held in trust by the United States for federally-recognized Indian tribes or individual Indians. An Indian trust has three components: (1) the trustee, (2) the beneficiary, and (3) the trust asset. An ITA can include land, minerals, federally-reserved hunting and fishing rights, federally-reserved water rights, and in-stream flows associated with trust land. Beneficiaries of the Indian trust relationship are federally-recognized Indian tribes with trust land; the United States is the trustee. By definition, ITA cannot be sold, leased, or otherwise encumbered without approval of the United States. The characterization and application of the United States trust relationship have been defined by case law that interprets Congressional acts, executive orders, and historic treaty provisions.

The Proposed Action would not affect an ITA because there are none located in the Proposed Action area.

4.4 Fish and Wildlife Coordination Act (16 U.S.C. § 661 et seq.)

The Fish and Wildlife Coordination Act (FWCA) requires that Reclamation consult with fish and wildlife agencies (federal and state) on all water development projects that could affect biological resources.

4.5 Endangered Species Act (16 U.S.C. § 1531 et seq.)

Section 7 of the Endangered Species Act requires Federal agencies, in consultation with the Secretary of the Interior and/or Commerce, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

The Proposed Action would be consistent with the 2008 USFWS and 2009 NMFS Biological Opinions on the operations of the CVP and SWP. Reclamation has determined the proposed action would not affect proposed or listed species or critical habitat.

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Appendix A

Proposed Action Operational Scenarios

Runoff forecasts used for the Sugar Pine Reservoir operations forecasts are based on the California Nevada River Forecast Center's (CNRFC) runoff forecast ensemble for the North Fork American River at North Fork Dam (Lake Clementine) downscaled to North Shirttail Canyon Creek. The CNRFC provides 59 runoff forecast traces, each extending 360 days from the February 11, 2015 forecast date. The first 10 days of each forecast uses current basin conditions and a 10-day temperature and precipitation forecast to develop runoff estimates. Following the initial 10 days, the CNRFC uses historic precipitation and temperature data from 1950 – 2009 to develop 59 traces of probable outcomes.

For this analysis, two of the 59 traces were used to develop the operational forecasts. The runoff forecasts chosen for this analysis are the 90th percentile forecast and the 50th percentile forecast. The 90th percentile forecast is a conservative estimate of runoff in the basin as 90 percent of the forecasts in the ensemble are wetter. The 90th percentile forecast is used in Operational Scenario 1. The 50th percentile forecast is as likely as the 90th percentile forecast; however, only 50 percent of the forecasts are wetter. Operational Scenario 2 uses the 50th percentile forecast.

Operational Scenario 1: *90th Percentile Forecast (Delivery of water from Sugar Pine Reservoir by June 1)*

Planned for spring 2015 is a transfer of 2,000 AF beginning May 1 and completed by June 1. The release would be made for a period of approximately 30 days at a rate 34 cfs greater than the instream flow-release required by the 1967 Department of Fish and Game Memorandum of Agreement for the Protection and Preservation of Fish and Wildlife and Recreational Resources (DFG Agreement or SWRCB 1967). To ensure 2,000 AF of new water would be delivered to Folsom Reservoir, the post-transfer storage would be 2,000 AF less than the pre-transfer storage.

The 2014-2015 water year is projected to be dry and have represented the inflow to Sugar Pine Reservoir with a runoff forecast. The runoff forecast was developed by scaling the California Nevada River Forecast Center's (CNRFC) forecast of unimpaired flow at the North Fork American River at North Fork Dam (Lake Clementine) by the ratio of watershed area of North Shirttail Creek to the North Fork American River at North Fork Dam. The forecasted data begins on February 11 of this year and continues through December 31. Year 2 and Year 3 are historic inflow data from 1990 and 1991, respectively. Figure 1 below illustrates the FPUD water transfer project's operations over three consecutive water years. A water year is October 1 through September 30. The green line with diamond markers illustrates Sugar Pine Reservoir water surface elevations and storage volume (operations) without the water transfer. The blue line with circular markers illustrates Sugar Pine Reservoir operations with the water transfer. Pursuant to the DFG Agreement, the orange line with square markers illustrates minimum storage of 3,560 AF between May 1 and September 30 for recreational use, and the purple line illustrates the 1,100 AF minimum pool for recreation (SWRCB 1967). Each water year is separated by a black vertical line.

<u>Year 1 (90th Percentile Forecast)</u>

In the first year, a 2,000 AF storage release would be made from Sugar Pine Reservoir over a one-month period beginning on May 1. Release of the transfer water would be completed by June 1. The resulting "Transfer Storage" would be 2,000 AF lower than the "Normal Operations

Storage" trace. For the remainder of the year the storage traces would be parallel, because the two operations each meet identical local demands from the FPUD service area and instream flow releases under the DFG Agreement.

Year 2 (No Folsom Reservoir spill – 1990 hydrology)

Operations of Sugar Pine Reservoir would meet local demands and instream flow releases in the second year, but would store any excess inflow. In year two, the storage reduction created by the water transfer would be replenished by the end of April. However, for the remainder of the year the storage traces would be parallel because the two operations meet identical demands and instream flow releases. The 2,000 AF storage reduction seen in the Transfer Storage operation would be constant throughout the year.

Year 3 (Folsom Reservoir spills – 1991 hydrology)

In the third year, again operations of Sugar Pine Reservoir would meet local demands and instream flow releases, but would store any excess inflow. Because the third year is assumed to be wet enough for both Folsom Reservoir and Sugar Pine Reservoir to spill. Sugar Pine Reservoir would refill and eliminate the storage reduction created by the water transfer in Year 1. By the end of May, Sugar Pine would be refilled.

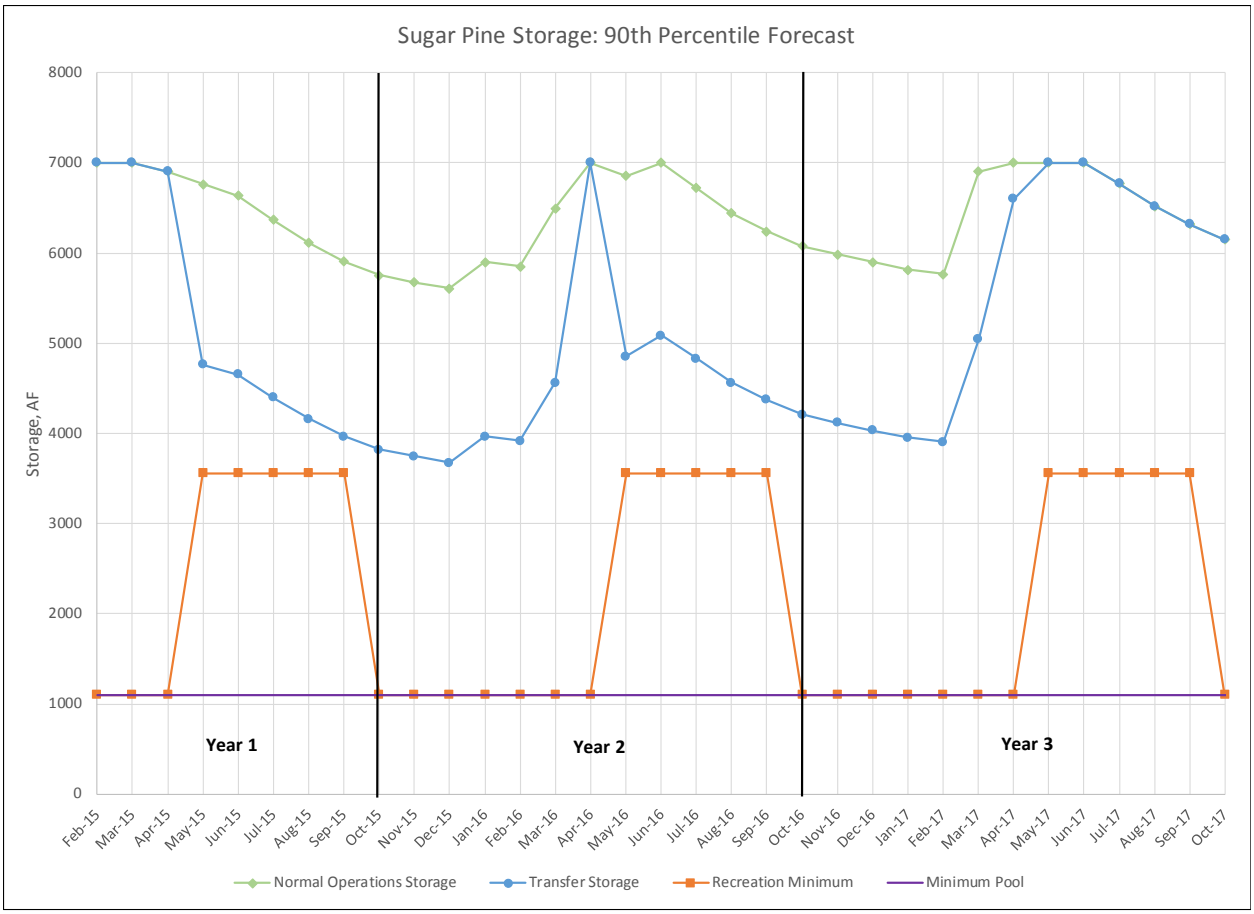

Figure 1. Sugar Pine Reservoir 90th Percentile Forecast

Operational Scenario 2: *50th Percentile Forecast (Delivery of water from Sugar Pine Reservoir by June 1)*

In normal hydrologic years, represented by the 50th percentile forecast, the Sugar Pine Reservoir spills but Folsom Reservoir does not. Starting in mid-spring, the reservoir would be drawn down to capacity (7,000 AF) minus the amount of the transfer (2,000 AF) for a total June 1 storage of approximately 5,000 AF. This approach demonstrates that the transfer water was released from storage.

Figure 2 below, illustrates the normal year operations over three consecutive water years. Again, the green line with diamond markers illustrates Sugar Pine Reservoir operations without the water transfer. The blue line with circular markers illustrates Sugar Pine Reservoir operations with the water transfer. Pursuant to the DFG Agreement, the orange line with square markers illustrates minimum storage of 3,560 AF between May 1 and September 30 for recreational use, and the purple line illustrates the 1,100 AF minimum pool for recreation (SWRCB 1967). Each water year is separated by a black vertical line.

Year 1 (50th percentile forecast)

A 2,000 AF storage release will be made from Sugar Pine Reservoir over a 30-day period beginning on May 1. The Release of the transfer water would be completed by June 1. The resulting "Transfer Storage" would be 2,000 AF lower than the "Normal Operations Storage" trace. For the remainder of the year, the storage traces would be parallel, because the two operations each meet identical local demands and instream flow releases under the DFG Agreement.

Year 2 (No Folsom Reservoir spill – 1990 hydrology)

In the second year, operations of Sugar Pine Reservoir would meet local demands and instream flow releases but would store any excess inflow. In year two, the storage reduction created by the water transfer would be replenished by the end of April, matching the storage of the Normal Operations Storage. However, in the second year, it is assumed that Folsom Reservoir does not spill, so Sugar Pine Reservoir would release the 2,000 AF it had stored earlier in the year. That storage release would be completed and delivered to Folsom Reservoir by June 1. The resulting Sugar Pine Reservoir "Transfer Storage" would be 2,000 AF lower than the "Normal Operations Storage" trace. For the remainder of the year the storage traces would be parallel, because the two operations each meet identical local demands and instream flow releases under the DFG Agreement.

Year 3 (Folsom Reservoir spills – 1991 hydrology)

In the third year, operations of Sugar Pine Reservoir would again meet local demands and instream flow releases under the DFG Agreement, but would store the excess inflow. Because the third year is assumed to be wet, both Folsom Reservoir and Sugar Pine Reservoir would spill, and Sugar Pine Reservoir would replenish the storage reduction created to deliver the transfer water in Year 1. By the end of May, Sugar Pine would be refilled.

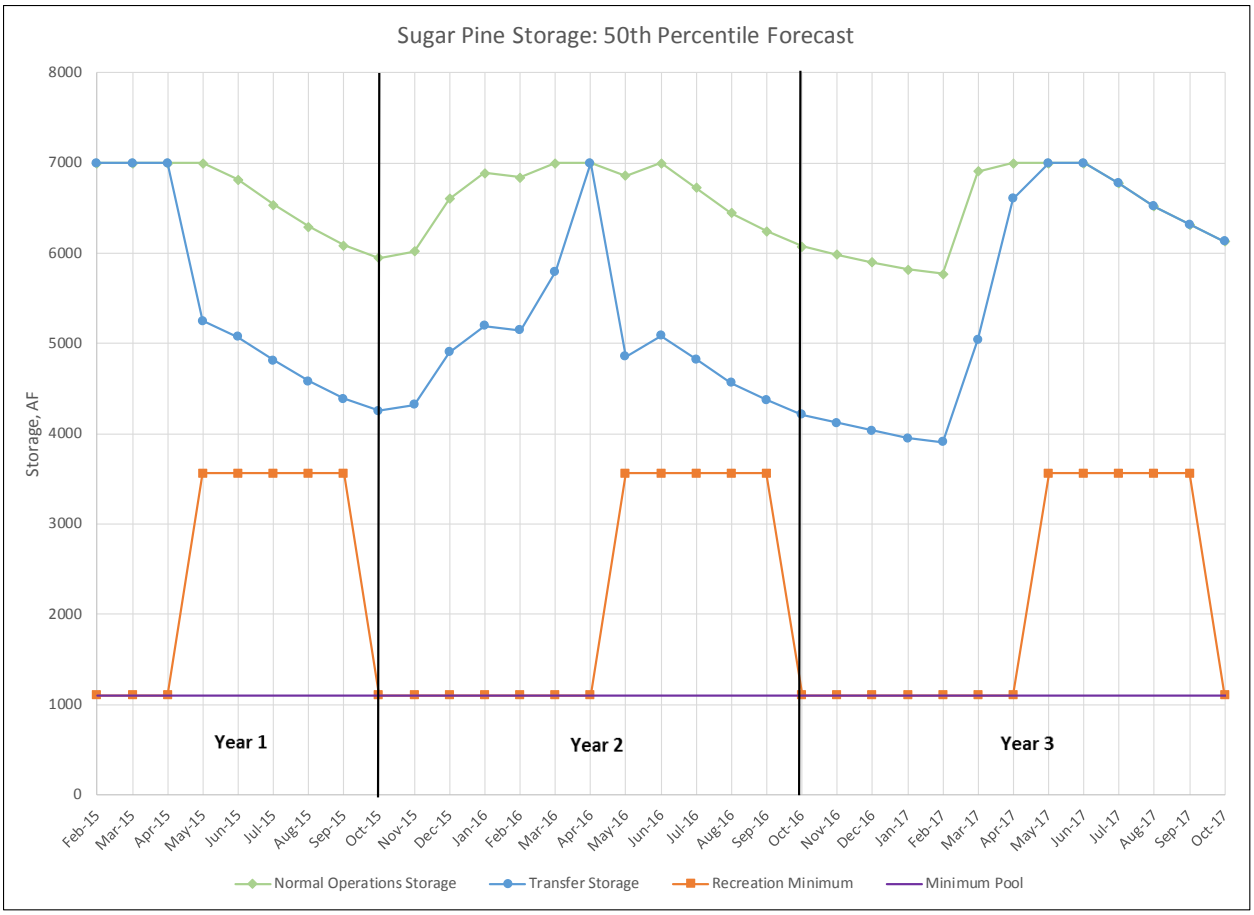

Figure 2. Sugar Pine Reservoir 50th Percentile Forecast

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Appendix B

Cultural Resources Compliance Memo

Appendix C

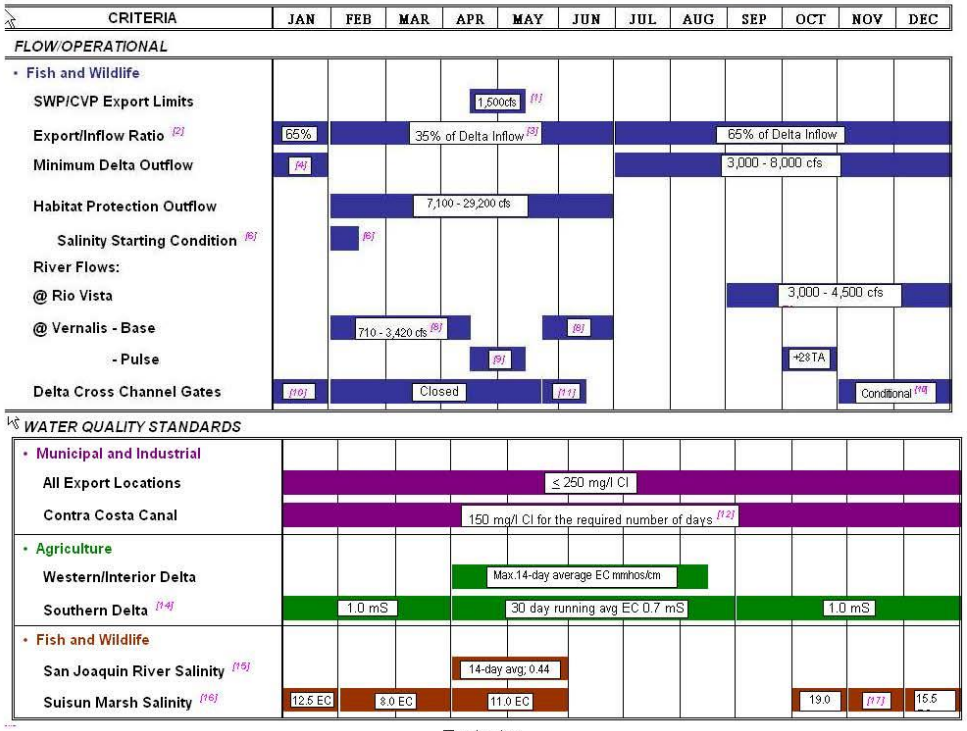
Indian Trust Assets Compliance Memo

Bay-Delta current standards based on Decision 1641 can be found at the following website.
http://www.water.ca.gov/swp/operationscontrol/docs/bay_deltastandards.htm

California Department of Water Resources - Division of Operationsand Maintenance Operations Control Office
The standards listed below have been implemented under the State Water Resources Control Board Decision-1641.

Bay-Delta Standards DRAFT

Contained in D-1641



Footnotes

[1][2][3][4][5][6][7][8][9][10][11][12][13][14][15][16 and 17][Table A]

1)

Maximum 3-day running average of combined export rate (cfs) which includes Tracy Pumping Plant and Clifton Court Forebay Inflow less Byron-Bethany

Year Type	All
Apr15 - May15*	The greater of 1,500 or 100% of 3-day avg. Vernalis flow

* This time period may need to be adjusted to coincide with fish migration. Maximum export rate may be varied by CalFed Op's group.

Back to Top

2)

The maximum percentage of average Delta inflow (use 3-day average for balanced conditions with storage withdrawal, otherwise use 14-day average) diverted
at Clifton Court Forebay (excluding Byron-Bethany pumping) and Tracy Pumping Plant using a 3-day average. (These percentages may be adjusted

Back to Top

3)

The maximum percent Delta inflow diverted for Feb may vary depending on the January 8RI.

Jan 8RI	Feb exp. limit
≤ 1.0 MAF	45%
between 1.0 & 1.5 MAF	35%-45%
> 1.5 MAF	35%

Back to Top

4)

Minimum monthly average Delta outflow (cfs). If monthly standard ≤ 5,000 cfs, then the 7-day average must be within 1,000 cfs of standard; if monthly standard > 5,000 cfs, then the 7-day average must be ≥ 80% of standard.

Year Type	All	W	AN	BN	D	C
Jan	4,500*					
Jul		8,000	8,000	6,500	5,000	4,000
Aug		4,000	4,000	4,000	3,500	3,000
Sep	3,000					
Oct		4,000	4,000	4,000	4,000	3,000
Nov-Dec		4,500	4,500	4,500	4,500	3,500

* Increase to 6,000 if the Dec 8RI is greater than 800 TAF

Back to Top

5)

Minimum 3-day running average of daily Delta outflow of 7,100 cfs OR: either the daily average or 14-day running average EC at Collinsville is less than 2.64 mmhos/cm (This standard for March may be relaxed if the Feb 8RI is less than 500 TAF. The standard does not apply in May and June if the May estimate of the SRI IS < 8.1 MAF at the 90% exceedence level in which case a minimum 14-day running average flow of 4,000 cfs is required.) For additional Delta outflow objectives, see **TABLE A**.

Back to Top

6)

February starting salinity: If Jan 8RI > 900 TAF, then the daily or 14-day running average EC @ Collinsville must be ≤ 2.64 mmhos/cm for at least one day between Feb 1-14. If Jan 8RI is between 650 TAF and 900 TAF, then the CalFed Op's group will determine if this requirement must be met.

Back to Top

7)

Rio Vista minimum monthly average flow rate in cfs (the 7-day running average shall not be less than 1,000 below the monthly objective).

Year Type	All	W	AN	BN	D	C
Sep	3,000					
Oct		4,000	4,000	4,000	4,000	3,000
Nov-Dec		4,500	4,500	4,500	4,500	3,500

Back to Top

8)

BASE Vernalis minimum monthly average flow rate in cfs (the 7-day running average shall not be less than 20% below the objective). Take the higher objective if X2 is required to be west of Chipps Island.

Year Type	All	W	AN	BN	D	C
Feb-Apr14 and May16-Jun		2,130 or 3,420	2,130 or 3,420	1,420 or 2,280	1,420 or 2,280	710 or 1,140

Back to Top

9)

PULSE Vernalis minimum monthly average flow rate in cfs. Take the higher objective if X2 is required to be west of Chipps Island.

Year Type	All	W	AN	BN	D	C
Apr15 - May15		7,330 or 8,620	5,730 or 7,020	4,620 or 5,480	4,020 or 4,880	3,110 or 3,540
Oct	1,000*					

* Up to an additional 28 TAF pulse/attraction flow to bring flows up to a monthly average of 2,000 cfs except for a critical year following a critical year. Time period based on real-time monitoring and determined by CalFed Op's group.

Back to Top

10)

For the Nov-Jan period, Delta Cross Channel gates may be closed for up to a total of 45 days.

Back to Top

11)

For the May 21-June 15 period, close Delta Cross Channel gates for a total of 14 days per CALFED Op's group. During the period the Delta cross channel gates may close 4 consecutive days each week, excluding weekends.

Back to Top

12)

Minimum # of days that the mean daily chlorides ≤ 150 mg/l must be provided in intervals of not less than 2 weeks duration. Standard applies at Contra Costa Canal Intake or Antioch Water Works Intake.

Year Type	W	AN	BN	D	C
# Days	240	190	175	165	155

Back to Top

13)

The maximum14-day running average of mean daily EC (mmhos/cm) depends on water year type.

	WESTERN DELTA				INTERIOR DELTA			
	Sac River @ Emmaton		SJR @ Jersey Point		Mokelumne R @ Terminous		SJR @ San Andreas	
Year Type	0.45 EC from April 1 to date shown	EC value from date shown to Aug15 *	0.45 EC from April 1 to date shown	EC value from date shown to Aug15 *	0.45 EC from April 1 to date shown	EC value from date shown to Aug15 *	0.45 EC from April 1 to date shown	EC value from date shown to Aug15 *
W	Aug 15		Aug 15		Aug 15		Aug 15	
AN	Jul 1	0.63	Aug 15		Aug 15		Aug 15	
BN	Jun 20	1.14	Jun 20	0.74	Aug 15		Aug 15	
D	Jun 15	1.67	Jun 15	1.35	Aug 15		Jun 25	0.58
C		2.78		2.20		0.54		0.87

* When no date is shown, EC limit continues from April 1.

Back to Top

14)

As per D-1641, for San Joaquin River at Vernalis: however, the April through August maximum 30- day running average EC for San Joaquin River at Brandt Bridge,Old River near Middle River, and Old River at Tracy Road Bridge shall be 1.0 EC until April 1, 2005 when the value will be 0.7 EC.

Back to Top

15)

Compliance will be determined between Jersey Point & Prisoners Point.
Does not apply in critical years or in May when the May 90% forecast of SRI ≤ 8.1 MAF.

Back to Top

16 and 17)

During deficiency period, the maximum monthly average mhtEC at Western Suisun Marsh stations as per SMPA is:

Month	mhtEC
Oct	19.0
Nov	16.5
Dec-Mar	15.6
Apr	14.0
May	12.5

In November, maximum monthly average mhtEC = 16.5 for Western Marsh stations and maximum monthly average mhtEC = 15.5 for Eastern Marsh stations in all periods types.

Back to Top

Table A)

TABLE A

Number of Days When Max. Daily Average Electrical Conductivity of 2.64 mmhos/cm Must Be Maintained. (This can also be met with a maximum 14-day running average EC of 2.64 mmhos/cm, or 3-day running average Delta outflows of 11,400 cfs and 29,200 cfs, respectively.) Port Chicago Standard is triggered only when the 14-day average EC for the last day of the previous month is 2.64 mmhos/cm or less. PMI is previous month's 8RI. If salinity/flow objectives are met for a greater number of days than required for any month, the excess days shall be applied towards the following month's requirement. The number of day's for values of the PMI between those specified below shall be determined by linear interpolation.

PMI	Chipps Island (Chipps Island Station D10)				
(TAF)	FEB	MAR	APR	MAY	JUN
≤ 500	0	0	0	0	0
750	0	0	0	0	0
1000	28*	12	2	0	0
1250	28	31	6	0	0
1500	28	31	13	0	0
1750	28	31	20	0	0
2000	28	31	25	1	0
2250	28	31	27	3	0
2500	28	31	29	11	1
2750	28	31	29	20	2
3000	28	31	30	27	4
3250	28	31	30	29	8
3500	28	31	30	30	13
3750	28	31	30	31	18
4000	28	31	30	31	23
4250	28	31	30	31	25
4500	28	31	30	31	27
4750	28	31	30	31	28
5000	28	31	30	31	29
5250	28	31	30	31	29
≥ 5500	28	31	30	31	30

*When 800 TAF < PMI < 1000 TAF, the number of days is determined by linear interpolation between 0 and 28 days.

PMI	Port Chicago (continuous recorder at Port Chicago)				
(TAF)	FEB	MAR	APR	MAY	JUN
0	0	0	0	0	0
250	1	0	0	0	0
500	4	1	0	0	0
750	8	2	0	0	0
1000	12	4	0	0	0
1250	15	6	1	0	0
1500	18	9	1	0	0
1750	20	12	2	0	0
2000	21	15	4	0	0
2250	22	17	5	1	0
2500	23	19	8	1	0
2750	24	21	10	2	0
3000	25	23	12	4	0
3250	25	24	14	6	0
3500	25	25	16	9	0
3750	26	26	18	12	0
4000	26	27	20	15	0
4250	26	27	21	18	1
4500	26	28	23	21	2
4750	27	28	24	23	3
5000	27	28	25	25	4
5250	27	29	25	26	6
5500	27	29	26	28	9
5750	27	29	27	28	13
6000	27	29	27	29	16
6250	27	30	27	29	19
6500	27	30	28	30	22
6750	27	30	28	30	24
7000	27	30	28	30	26
7250	27	30	28	30	27
7500	27	30	29	30	28
7750	27	30	29	31	28
8000	27	30	29	31	29
8250	28	30	29	31	29
8500	28	30	29	31	29
8750	28	30	29	31	30
9000	28	30	29	31	30
9250	28	30	29	31	30
9500	28	31	29	31	30
9750	28	31	29	31	30
10000	28	31	30	31	30
> 10000	28	31	30	31	30

Back to Top

Appendix E

Temporary Transfer Order Approval

STATE OF CALIFORNIA
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
STATE WATER RESOURCES CONTROL BOARD

DIVISION OF WATER RIGHTS

WATER TRANSFER APPROVAL (TEMPORARY TRANSFER)

TRANSFER OF UP TO 2,000 ACRE-FEET OF WATER FROM FORESTHILL PUBLIC UTILITY DISTRICT UNDER PERMIT 15375 (APPLICATION 21945) TO SANTA CLARA VALLEY WATER DISTRICT

SOURCE OF TRANSFER WATER: SUGAR PINE RESERVOIR ON NORTH SHIRTTAIL CANYON CREEK

COUNTY TRANSFER WATER OBTAINED FROM: PLACER
COUNTY TRANSFER WATER MADE AVAILABLE TO: SANTA CLARA

BY THE DEPUTY DIRECTOR FOR WATER RIGHTS:

1.0 SUBSTANCE OF PETITION

On March 12, 2015, Foresthill Public Utility District (FPUD) filed with the State Water Resources Control Board (State Water Board), Division of Water Rights (Division) a petition for temporary change under Water Code section 1725, et seq. Under the transfer, up to 2,000 acre-feet (af) of water would be provided to Santa Clara Valley Water District (SCVWD). The temporary transfer period begins on the date of State Water Board transfer approval.

1.1 Description of Transfer

To facilitate the transfer, the following changes to FPUD's license are requested: (1) temporary addition of Banks Pumping Plant (Banks) as a point of rediversion; and (2) temporary addition of the SCVWD service area as an additional place of use.

The transfer has been identified as a reservoir storage transfer.

FPUD proposes to release surface water from Sugar Pine Reservoir into North Shirttail Canyon Creek, then to the North Fork American River, and subsequently into Folsom Reservoir by June 1, 2015. The water would be released from Folsom Reservoir into Lake Natoma, impounded by Nimbus Dam into the Lower American River, and subsequently would flow into the Sacramento River and the Delta and be exported at Banks into the South Bay Aqueduct and delivered to SCVWD facilities through existing turnouts.

2.0 BACKGROUND

Permit 15375 (Application 21945) authorizes the direct diversion of up to 18 cfs of water from about November 1 of each year to about July 1 of the succeeding year and 15,400 acre-feet per annum by storage to be collected from about November 1 of each year to about July 1 of the succeeding year. The permit does not authorize collection of water to storage outside of the specified season to offset

evaporation and seepage losses or for any other purpose. The source of water is the North Shirttail Canyon Creek, tributary to the North Fork American River.

The existing point of diversion to storage at Sugar Pine Reservoir is located at N 44˚30' E 2,900' from the SW corner of Section 24, being within the NE 1/4 of SW 1/4, Section 24, T15N, R10E, MDB&M. The existing point of rediversion to a regulating reservoir is located at S 61˚W 3,650' from the NE corner of Section 24, being within the SE 1/4 of NW 1/4, S24, T14N, R10E, MDB&M.

The existing place of use is in Sections 3, 4, 5 and 6 of T14N, R10E; Sections 13, 24, 25, 26, 27, 33, 34, 35, and 36 of T15N, R10E; and Sections 17, 18, 19, and 20 of T15N, R11E, MDB&M, as shown on a map filed with the State Water Board under Application 21945.

The authorized purposes of use are irrigation, municipal, industrial, domestic, recreational, and fishery maintenance and enhancement.

The transfer has been reviewed by Division staff to ensure that the transfer quantity, purpose of use and season are within the scope of the existing right and that the source of transfer water is an authorized source under the water right.

2.1 Governor's Proclamations of a Drought State of Emergency

On January 17, 2014, Governor Edmund G. Brown Jr. issued a Proclamation of a Drought State of Emergency (Proclamation). The Proclamation finds that dry conditions and lack of precipitation present urgent problems to drinking water supplies and cultivation of crops, which put farmers' long-term investments at risk. The conditions also threaten the survival of animals and plants that rely on California's rivers, including many species in danger of extinction.

The Proclamation refers to the Governor's Executive Order B-21-13 (Executive Order), issued on May 20, 2013 for the purpose of streamlining approval for water transfers to address the dry conditions and water delivery limitations to protect California's agriculture. The Executive Order directs the State Water Board and DWR to expedite processing of water transfers (in accordance with the Water Code) and to assist water transfer proponents and suppliers, as necessary, provided that the transfers will not harm other legal users of water and will not unreasonably affect fish, wildlife, or other instream beneficial uses. The State Water Board and the Department of Water Resources (DWR) were also directed to make all efforts to coordinate with relevant federal agencies, water districts, and water agencies to expedite the review and approval of water transfers in California.

On April 25, 2014, Governor Brown issued a Proclamation of a Continued State of Emergency (April Proclamation). The Governor reiterates direction to DWR and the State Water Board to immediately and expeditiously process requests to move water to areas of need, including requests involving voluntary water transfers. If necessary, DWR will request that the State Water Board consider changes to water right permits to enable such voluntary movements of water. The April Proclamation also states that for actions taken pursuant to Directive 2 (water transfers), section 13247 of the California Water Code is suspended. California Water Code section 13247 requires that state offices, departments, and boards, in carrying out activities which may affect water quality, shall comply with water quality control plans approved or adopted by the State Water Board, unless otherwise directed or authorized by statute in which case they shall indicate to the regional boards in writing their authority for not complying with such plans.

On April 1, 2015, the Governor issued Executive Order B-29-15 to save water, increase enforcement of water laws, streamline government response to the drought, and invest in new water. It references that the orders and provisions of the January 17, 2014 Proclamation and April 25, 2014 Proclamation are still in effect, unless otherwise modified. The provisions of the January and April 2014 Proclamations relating to streamlining approval of water transfers are still in effect.

2.2 Notice of Potential Curtailment

On January 23 and April 2, 2015, the State Water Board issued statewide public notices of potential curtailment of post-1914 water rights. The direct diversion and collection of water to storage under the permit held by FPUD could be subject to the curtailment notice. However, releases of water collected to storage prior to issuance of the curtailment notices, such as in the case of this transfer, are not subject to curtailment.

2.3 2015 Temporary Urgency Change Petition

On January 23, 2015, DWR and the U.S. Bureau of Reclamation (Reclamation) jointly filed a Temporary Urgency Change Petition (TUCP), pursuant to California Water Code section 1435 et seq., to temporarily modify the water right license and permit terms and conditions for the State Water Project (SWP) and Central Valley Project (CVP) specified in State Water Board Decision D-1641 (D-1641) requiring compliance with Delta water quality objectives in the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta) in response to drought conditions. The State Water Board issued an Order approving portions of the TUCP on February 3, 2015. That Order was modified on March 5 and April 6, 2015.

3.0 PUBLIC NOTICE OF THE PROPOSED TEMPORARY CHANGE

On March 20, 2015, a 15 day public notice of the petition for temporary change was provided by posting on the Division's website and via the State Water Board's electronic subscription mailing list. In addition, on March 26, 2015 FPUD noticed the project via publication in the Auburn Journal newspaper and mailed the notice via first class mail to interested parties. No comments were received.

4.0 COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Water Code section 1729 exempts temporary changes involving a transfer of water from the requirements of CEQA. (Pub. Resources Code, § 21000, et seq.) The State Water Board will issue a Notice of Exemption for this project.

In addition to any obligation the State Water Board may have under CEQA, the Board has an independent obligation to consider the effect of the proposed project on public trust resources and to protect those resources where feasible. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419.) The State Water Board may approve a temporary change due to a transfer of water only if it determines that the proposed temporary change would not unreasonably affect fish, wildlife, or other instream beneficial uses. (Wat. Code, § 1727, subd. (b)(2).) The independent evaluation of impacts to public trust resources was conducted concurrent with the Water Code section 1727 evaluation.

5.0 REQUIRED FINDINGS OF FACT

5.1 Transfer Only Involves Water That Would Have Been Consumptively Used or Stored

Before approving a temporary change due to a transfer or exchange of water, the State Water Board must find that the transfer would only involve the amount of water that would have been consumptively used or stored by the permittee or licensee in the absence of the proposed temporary change or conserved pursuant to Water Code section 1011. (Wat. Code, §§ 1725, 1726.) Water Code section 1725 defines "consumptively used" to mean "the amount of water which has been consumed through use by evapotranspiration, has percolated underground, or has been otherwise removed from use in the downstream water supply as a result of direct diversion."

In the absence of the transfer the water would have remained in storage in Sugar Pine Reservoir.

In light of the above, I find in accordance with Water Code section 1726, subdivision (e) that the water proposed for transfer pursuant to this Order would have been consumptively used or stored in the absence of the proposed temporary change.

5.2 No Injury to Other Legal Users of the Water

Before approving a temporary change to allow a transfer or exchange of water, the State Water Board must find that the transfer would not injure any legal user of the water during any potential hydrologic condition that the Board determines is likely to occur during the proposed change, through significant changes in water quantity, water quality, timing of diversion or use, consumptive use of the water, or reduction in return flows. (Wat Code, § 1727, subd. (b)(1).)

The water proposed for transfer pursuant to this temporary change consists of water previously stored in Sugar Pine Reservoir pursuant to Permit 15375. In the absence of the proposed transfer, the water would remain in storage for future use by FPUD and would not be available to other water users. There will be no change in return flows from FPUD's service area. Further, the releases from storage pursuant to the temporary transfer will not reduce the available supply to any other legal user of water downstream of Sugar Pine Reservoir. Refill of the storage vacated for the transfer will only occur during periods when it will not affect the amount of water that would otherwise have been available to other legal users downstream of Sugar Pine Reservoir.

The transfer is subject to a reservoir refill agreement with Reclamation and DWR ensuring that future refill to replace the stored water released for transfer will not reduce the amount of water that Reclamation, DWR, or other water users could otherwise divert under their water rights during the refill period.

In general, the transfer of water that would have otherwise been stored will not result in injury to other legal users of the water. In the absence of the proposed transfer, the proposed transfer water would remain in storage in Sugar Pine Reservoir.

In light of the above, I find in accordance with Water Code section 1727, subdivision (b)(1) that the proposed temporary change would not injure any legal users of the water.

5.3 No Unreasonable Effect on Fish, Wildlife, or Other Instream Beneficial Uses

Before approving a temporary change in order to facilitate a transfer of water, the State Water Board must find that the proposed change would not unreasonably affect fish, wildlife, or other instream beneficial uses. (Wat. Code, § 1727, subd. (b)(2).) In accordance with California Code of Regulations section 794 (c), FPUD provided California Department of Fish and Wildlife (CDFW) and the Central Valley Regional Water Quality Control Board (CVRWQCB) with a copy of the petition. CDFW and the CVRWQCB did not provide any information regarding potential effects of the proposed changes on water quality, fish, wildlife, and other instream beneficial uses.

FPUD states that the timing of the proposed transfer would likely have a positive effect on summer minimum instream flows and water quality in the upper American River. FPUD also states that delivery of transfer water to Folsom Reservoir by June 1 will augment the cold water pool in Folsom Reservoir.

All water diverted at Banks is done in accordance with the criteria contained in D-1641 and the Biological Opinions (BOs). DWR and Reclamation will continue to meet the objectives specified in D-1641 or any subsequent orders in effect at the time of the export, as well as the requirements contained in the BOs and the SWP-CVP Order issued on February 3, 2015 and revised on March 5 and April 6, 2015. The quantity of transfer water to be conveyed through the Delta, including other currently planned transfers, is well within the quantities analyzed in the environmental documents

issued for the BOs. The transfer will not result in a measurable change in quantity or quality of return flows.

The transfer is subject to all existing restrictions regarding use of the Delta Pumps, including existing BOs. For any transfers outside the operations currently permitted by the applicable BOs, FPUD must comply with the Endangered Species Act (ESA) prior to transferring water.

In light of the above, I find in accordance with Water Code section 1727, subdivision (b)(2) that the proposed transfer would not unreasonably affect fish, wildlife, or other instream beneficial uses.

6.0 STATE WATER BOARD'S DELEGATION OF AUTHORITY

On June 5, 2012, the State Water Board adopted Resolution 2012-0029, delegating to the Deputy Director for Water Rights the authority to act on petitions for temporary change if the State Water Board does not hold a hearing. This Order is adopted pursuant to the delegation of authority in section 4.4.2 of Resolution 2012-0029.

7.0 CONCLUSIONS

The State Water Board has adequate information in its files to make the evaluation required by Water Code section 1727, and therefore I find as follows:

I conclude that, based on the available evidence:

1. The proposed transfer involves only an amount of water that would have been consumptively used or stored in the absence of the temporary change.

2. The proposed temporary change will not injure any legal user of the water.

3. The proposed temporary change will not have an unreasonable effect upon fish, wildlife, or other instream beneficial uses.

ORDER

NOW, THEREFORE, IT IS ORDERED that the petition filed for temporary change for the transfer of up to 2,000 af of water under Permit 15375 is approved. All existing conditions of the water right remain in effect, except as temporarily amended by the following provisions:

1. The transfer period commences on the issuance of this Order and remains in effect for one year from the date of approval.

2. The place of use under FPUD's Permit 15375 is temporarily amended to add:

   SCVWD place of use as the shown on the map submitted with the transfer petition.

3. Transfer water may be temporarily rediverted at the following location:

   Point of Rediversion:
   Banks via the Clifton Court Forebay – being within the NW ¼ of SE ¼ of projected section 20, T1S, R4E, MDB&M, as shown on maps on file with the State Water Board under DWR Application 5626.

4. Rediversion of water at Banks is subject to compliance by the operators with the objectives currently required of DWR and Reclamation set forth in Tables 1, 2, and 3 on pages 181-187 of

D-1641, or any future State Water Board Order or decision implementing Bay-Delta water quality objectives at those points of diversion/rediversion, including compliance with the various plans required under D-1641 as prerequisites for the use of the Joint Points of Diversion by DWR and Reclamation, as amended by the documents cited in Order item 5. Rediversion of water is also subject to compliance by DWR and Reclamation with all applicable BOs and court Orders and any other conditions imposed by other regulatory agencies applicable to these operations.

5. Rediversion of water at Banks is also subject to compliance with any State Water Board Orders establishing temporary or interim operating conditions during the transfer period, except if the State Water Board has specifically exempted conveyance of transfer water from the Order.

6. Water may not be transferred through Banks until FPUD has executed an acceptable Refill Agreement between DWR, Reclamation and FPUD to address potential refill concerns. Documentation that an acceptable Refill Agreement has been agreed to by DWR, Reclamation and FPUD shall be submitted to the Division within 15 days of the date of execution of the Refill Agreement. The terms of the Refill Agreement shall be binding until such time as all the storage vacated for the transfer has been refilled during periods consistent with the terms of the Refill Agreement. The refill period may span multiple years if the hydrologic conditions in the year following the transfer are not consistent with the terms of the Refill Agreement. FPUD may be required to relinquish for downstream release any reservoir storage collected in violation of the Refill Agreement (up to the transfer quantity), in accordance with a schedule acceptable to DWR and Reclamation.

7. The transfer period authorized above is further limited to the period allowed pursuant to any applicable BO or ESA consultations (or informal consultations) related to transfers at the Delta pumps. FPUD shall provide documentation of the diversion period allowed pursuant to the BOs or consultations prior to transfer of water. Such documentation may include an electronic link to any transfer BOs or ESA consultations, informal ESA consultations, opinions, or other documents issued by CDFW, National Marine Fisheries Service or U.S. Fish and Wildlife Service.

8. If at any time prior to, or during the period of the transfer, the State Water Board issues a notice curtailing the use of water pursuant to the water right involved in the transfer, only water collected to storage prior to issuance of the curtailment notice may be transferred.

9. FPUD is responsible for providing the Deputy Director for Water Rights a monthly report describing the transfer of water pursuant to this Order until such time as the transfer has been completed. The report shall include the following information:

    a. The average daily release rates and corresponding volume of water released from Folsom Reservoir as a result of this transfer (reported on a daily basis).

    b. The daily average rate of water diverted and daily volume of water diverted at the point of diversion at Banks pursuant to this Order.

    c. The daily amounts of water delivered to SCVWD pursuant to this Order.

    d. Recognizing that reservoir refill will occur after the transfer ends; monthly reporting of reservoir refill is not required during the transfer period. However, FPUD shall provide annual reporting by May 1 of each year on monthly reservoir refill until the reservoir Refill Agreement has been satisfied. This occurs when the value of the Refill Reservation, as defined in the Refill Agreement, equals zero. These reports shall include the daily values of the Refill Reservation.

    If any of the above required information is in the possession of DWR and Reclamation and has not been provided to FPUD in time for inclusion in a monthly or annual report, FPUD shall provide the information to the Deputy Director for Water Rights within 30 days of receipt.

10. Pursuant to Water Code sections 100 and 275 and the common law public trust doctrine, all rights and privileges under this transfer and temporary change Order, including method of diversion, method of use, and quantity of water diverted, are subject to the continuing authority of the State Water Board in accordance with law and in the interest of the public welfare to protect public trust uses and to prevent waste, unreasonable use, unreasonable method of use or unreasonable method of diversion of said water.

    The continuing authority of the State Water Board also may be exercised by imposing specific requirements over and above those contained in this Order to minimize waste of water and to meet reasonable water requirements without unreasonable draft on the source.

11. This Order does not authorize any act which results in the taking of a threatened or endangered species or any act which is now prohibited, or becomes prohibited in the future, under either the California ESA (Fish and Game Code sections 2050 to 2097) or the federal ESA (16 U.S.C.A. sections 1531 to 1544). If a "take" will result from any act authorized under this temporary transfer, the licensee shall obtain authorization for an incidental take prior to commencing transfer of water. Permittee shall be responsible for meeting all requirements of the applicable ESA for the temporary transfer authorized under this Order.

12. I reserve authority to supervise the transfer, exchange and use of water under this Order, and to coordinate or modify terms and conditions, for the protection of vested rights, fish, wildlife, instream beneficial uses and the public interest as future conditions may warrant.

STATE WATER RESOURCES CONTROL BOARD

ORIGINAL SIGNED BY:

Barbara Evoy, Deputy Director
Division of Water Rights

Dated: APR 13 2015