

Memorandum

Date: September 11, 2013

To: Robert B. Cooke, Chief
State Water Project Analysis Office

From: Spencer Kenner, Assistant Chief Counsel
Department of Water Resources

Subject: **DECISIONS RELATING TO THE FINAL INITIAL STUDY/NEGATIVE DECLARATION
STATE WATER PROJECT ALLOCATION SETTLEMENT AGREEMENTS**

1. Adoption of Negative Declaration

Attachment 1 includes the Final Initial Study and Negative Declaration on the State Water Project Supply Allocation Settlement Agreements, comments received on the Final Initial Study/Negative Declaration, and Department of Water Resources' (DWR's) response to the comments.

CEQA requires public agencies, like DWR, to adopt a Negative Declaration before approving a proposed project which could have a significant impact on the environment. Section 15074, subd. (b) of the CEQA Guidelines states that "[t]he decision making body shall adopt the proposed negative declaration only if it finds on the basis of the whole record before it (including the initial study and any comments received), that there is no substantial evidence that the project will have a significant effect on the environment and the negative declaration or mitigated negative declaration reflects the lead agency's independent judgment and analysis."

If after review and consideration of Attachment 1, you determine that DWR should adopt the Final Initial Study/Negative Declaration, you should indicate that decision by signing the following statement:

I have reviewed and considered Attachment 1. I find that there is no substantial evidence that the project will have a significant effect on the environment and that the Final Initial Study/Negative Declaration reflects the lead agency's independent judgment and analysis and I adopt the Final Initial Study/Negative declaration



Robert B. Cooke, P.E., Chief
State Water Project Analysis Office

2. Location and Custodian of the Record of Proceedings

Section 15074, subd. (c) of the CEQA Guidelines states that “[w]hen adopting a negative declaration or mitigated negative declaration, the lead agency shall specify the location and custodian of the documents or other material which constitute the record of proceedings upon which its decision is based.”

The location of the documents or other material which constitute the record of proceedings upon which this decision is based is: Department of Water Resources, 1416 9th Street, Room 354, Sacramento, CA 95814. The custodian of the documents is: Kora Bitcon (916) 653-9313.



Robert B. Cooke, P.E., Chief
State Water Project Analysis Office

Attachment 1:

Final Initial Study/Negative Declaration for the State Water Project Supply Allocation Settlement Agreement with Appendix C: Comments, and Appendix D: DWR's Responses to Comments

ATTACHMENT 1

Final Initial Study/Negative Declaration
State Water Project Supply Allocation
Settlement Agreement

Prepared for:



California Department of Water Resources
State Water Project Analysis Office

AECOM

September 2013

Final Initial Study/Negative Declaration
State Water Project Supply Allocation
Settlement Agreement

Prepared for:

California Department of Water Resources
State Water Project Analysis Office
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September 2013

Date: July 19, 2013

To: Responsible and Trustee Agencies, Interested Parties, and Organizations

Subject: **NOTICE OF INTENT TO ADOPT AN INITIAL STUDY/NEGATIVE DECLARATION FOR THE STATE WATER PROJECT SUPPLY ALLOCATION SETTLEMENT AGREEMENT**

The California Department of Water Resources (DWR) has prepared and intends to adopt a Negative Declaration (ND) for the Proposed Project in compliance with the California Environmental Quality Act (CEQA) and State CEQA Guidelines.

Project Title: State Water Project Supply Allocation Settlement Agreement

Lead Agency: California Department of Water Resources, State Water Project Analysis Office

Project Location: State Water Project (SWP) service area

Project Description: The Proposed Project consists of approving four separate settlement agreements and amendments related to the agreements to SWP long-term water supply contracts between DWR and four SWP water contractors: Solano County Water Agency (SCWA), the Napa County Flood Control and Water Conservation District (Napa), the City of Yuba City (Yuba City), and the County of Butte (Butte County). These four SWP water contractors are also plaintiffs in litigation filed against DWR. These settlement agreements will also be approved by the other SWP water contractors and/or interested parties who intervened in the lawsuit.¹ Implementing the provisions of the settlement agreements would result in modifying SWP allocations to improve water delivery reliability and modify the volume of SWP water that may be delivered to each of the Plaintiff Water Contractors located North of Delta that has been reduced as a result of export limitations South of Delta imposed under regulatory requirements, such as pursuant to the California and federal Endangered Species Acts (“Proposed Project”). The Proposed Project would not change existing export limitations and would not directly induce growth not already planned within local land use plans. DWR will continue to meet existing regulatory requirements, including applicable water quality limits and measures defined in biological opinions for designated species.

Environmental Review Process: DWR has directed the preparation of an IS/proposed ND on the Proposed Project in accordance with the requirements of CEQA. The IS/ND describes the proposed SWP Supply Allocation Settlement Agreement and changes to SWP operations needed for its implementation. The IS/ND provides an assessment of the Proposed Project’s potential significant adverse impacts on the environment. The IS/ND concludes that no potentially significant impacts would result from the Proposed Project. No measures have been found necessary or have been proposed to mitigate potential significant impacts to the environment.

¹ The Intervenor consists of the following SWP contractors and/or interested parties: Metropolitan Water District of Southern California, Alameda County Flood Control & Water Conservation District, Zone 7, Alameda County Water District, Antelope Valley-East Kern Water Agency, Castaic Lake Water Agency, Central Coast Water Authority, Coachella Valley Water District, Kern County Water Agency, Mojave Water Agency, Palmdale Water District, San Geronimo Pass Water Agency, Santa Clara Valley Water District, and Tulare Lake Basin Water Storage District.

Public Review Period: The IS/ND is being circulated for public review and comment for a review period of 30 days starting July 19, 2013. Written comments should be submitted and received at the following address no later than 5 p.m. on August 19, 2013.

Ted Alvarez, Supervising Engineer
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State Water Project Analysis Office
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Sacramento, CA 95814
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To Review or Obtain a Copy of the Environmental Document: Copies of the draft IS/ND may be reviewed at the following locations:

Beale Memorial Library
701 Truxtun Avenue
Bakersfield, CA 93301

Colusa County Library
738 Market Street
Colusa, CA 95932

Mary L. Stephens Davis Branch
Library
315 E. 14th Street
Davis, CA 95616

El Centro Public Library
Community Center Branch
375 South 1st Street
El Centro, CA 92243

Fairfield Civic Center Library
1150 Kentucky Street
Fairfield, CA 94533

Fremont Library
2400 Stevenson Boulevard
Fremont CA 94538

Hanford Branch Library
401 North Douty Street
Hanford, CA 93230

Los Angeles Public Library
Central Library
630 West 5th Street
Los Angeles, CA 90071

Merced County Library
Merced Branch
2100 O Street
Merced, CA 95340

Modesto Public Library
1500 I Street
Modesto, CA 95354

Napa Main Library
580 Coombs Street
Napa, CA 94559

Oroville Branch Library
1820 Mitchell Avenue
Oroville, CA 95966

Pleasant Hill Library
1750 Oak Park Boulevard
Pleasant Hill, CA 94523

Quincy Public Library
445 Jackson Street
Quincy CA 95971

Red Bluff Library
645 Madison Street
Red Bluff, CA 96080

Redding Library
1100 Parkview Avenue
Redding, CA 96001

Riverside Public Library
Main Library
3581 Mission Inn Avenue
Riverside, CA 92501

Sacramento County Library
Central Library
828 I Street
Sacramento, CA 95202

Norman F. Feldheim Central
Library
555 West 6th Street
San Bernardino, CA 92410

San Diego Public Library
Central Library
820 E Street
San Diego, CA 92101

Dr. Martin Luther King, Jr.
Library
150 East San Fernando Street
San Jose, CA 95112

San Luis Obispo Library
995 Palm Street
San Luis Obispo, CA 93401

Central Library
40 East Anapamu Street
Santa Barbara, CA 93101

Cesar Chavez Central Library
605 N. El Dorado Street
Stockton, CA 95202-1907

E. P. Foster Library
651 East Main Street
Ventura, CA 93001

Visalia Branch Library
200 West Oak Avenue
Visalia, CA 93291

Willows Public Library
201 North Lassen Street
Willows, CA 95988

Sutter County Library
Main Branch
750 Forbes Avenue
Yuba City, CA 95991

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NEGATIVE DECLARATION

Project: State Water Project Supply Allocation Settlement Agreement

Lead Agency: Department of Water Resources, State Water Project Analysis Office

PROJECT DESCRIPTION

The California Department of Water Resources (DWR) is proposing to approve four settlement agreements and amendments related to the agreements to State Water Project (SWP) long-term water supply contracts (SWP Contracts) with four SWP water contractors: Solano County Water Agency, the Napa County Flood Control and Water Conservation District, City of Yuba City, and the County of Butte (collectively referred to as the Plaintiff Water Contractors).

The Proposed Project consists of approving four separate settlement agreements and SWP Contract amendments between DWR and each of the Plaintiff Water Contractors and other SWP water contractors and/or interested parties who intervened (Intervenors)¹ (collectively referred to as The Parties). Implementing the provisions of the settlement agreements would result in modifying SWP allocations to improve SWP water delivery reliability and modify the volume of SWP water that may be delivered to each of the Plaintiff Water Contractors. Improvement of the SWP water delivery reliability and modification in volume of SWP water would not directly induce growth not already planned within current local land use plans. Water provided through implementation of the settlement agreements could remove an obstacle to future growth that is planned within current local land use plans; however, such growth and development would be subject to future environmental impact analysis by each Plaintiff Water Contractor at the time such development is proposed. DWR would continue to meet all existing requirements, including water quality and biological opinions for listed species.

FINDINGS

An Initial Study has been prepared to assess the Proposed Project's potential effects on the environment and the significance of those effects. Based on the Initial Study, it has been determined that the Proposed Project would not have any significant effects on the environment. This conclusion is supported by the Initial Study herein and the following findings:

1. The Proposed Project would have no effects on cultural resources, land use and planning, mineral resources, population and housing, public services, hazards and hazardous materials, and transportation/traffic.
2. The Proposed Project would have a less-than-significant impact on aesthetics, agriculture and forestry resources, air quality, biological resources, geology and soils, greenhouse gas emissions, hydrology and water quality, noise, recreation, and utilities and service systems.

¹ The Intervenors consist of the following SWP contractors and/or interested party(ies): Metropolitan Water District of Southern California, Alameda County Flood Control & Water Conservation District, Zone 7, Alameda County Water District, Antelope Valley-East Kern Water Agency, Castaic Lake Water Agency, Central Coast Water Authority, Coachella Valley Water District, Kern County Water Agency, Mojave Water Agency, Palmdale Water District, San Geronio Pass Water Agency, Santa Clara Valley Water District, and Tulare Lake Basin Water Storage District.

3. The Proposed Project would have no potentially significant impacts on the environmental resources addressed in the Initial Study.

No mitigation measures are required to avoid, offset, or otherwise minimize significant adverse impacts on the environment.

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ACRONYMS AND OTHER ABBREVIATIONS

°C	degrees Celsius
µg/m ³	micrograms per cubic meter
1995 WQCP	<i>1995 Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta</i>
af	acre-foot, acre-feet
afy	acre-feet per year
ARB	California Air Resources Board
ATA	Advanced Table A
BAAQMD	Bay Area Air Quality Management District
Banks Pumping Plant	Harvey O. Banks Pumping Plant
BCAQMD	Butte County Air Quality Management District
BDCP	Bay Delta Conservation Plan
BMWD	Berrenda Mesa Water District
BO	biological opinion
Butte County	County of Butte
BWSD	Belridge Water Storage District
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CalEPA	California Environmental Protection Agency
CALFED	CALFED Bay-Delta Program
Caltrans	California Department of Transportation
Cal Water	California Water Service Company
CAP	climate action plan
CCAT	California Climate Action Team
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFC & WCD	County Flood Control and Water Conservation District
cfs	cubic feet per second
City Plans	general plans of the Cities of Biggs, Chico, Gridley, Oroville, and Paradise
CO	carbon monoxide
CO ₂	carbon dioxide
<u>COA</u>	<u>agreement for the Coordinated Operation of the Central Valley Project and the State Water Project</u>
CVP	Central Valley Project
D-1641	State Water Resources Control Board Water Right Decision 1641
DCC	Delta Cross Channel
Delta	Sacramento–San Joaquin Delta
DOC	California Department of Conservation
DOT	U.S. Department of Transportation
DRWD	Dudley Ridge Water District
DWR	California Department of Water Resources

EIR	environmental impact report
EIS/R	environmental impact statement/environmental impact report
EPA	U.S. Environmental Protection Agency
Farmland	Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
FRAQMD	Feather River Air Quality Management District
FRWA	Freeport Regional Water Authority
GGERP	greenhouse gas emissions reductions plan
GHG	greenhouse gas
HCP	habitat conservation plan
IS	initial study
IS/ND	initial study/negative declaration
IWRP	integrated water resources plan
km	kilometer(s)
LHWD	Lost Hills Water District
LSZ	low-salinity zone
M&I	municipal and industrial
mgd	million gallons per day
mg/m ³	milligrams per cubic meter
MMT CO ₂ e	million metric tons of carbon dioxide equivalent
msl	mean sea level
MWD	Metropolitan Water District of Southern California
MWh/yr	megawatt-hours per year
NAAQS	national ambient air quality standards
Napa	Napa County Flood Control and Water Conservation District
Napa General Plans	general plans for Napa County and the Cities of Napa, American Canyon, and Calistoga
NCCP	natural community conservation plan
ND	negative declaration
NMFS	National Marine Fisheries Service
NO ₂	nitrogen dioxide
NOD	North of the Delta
NOI/NOP	notice of intent/notice of preparation
Plaintiff Water Contractors	Solano County Water Agency, the Napa County Flood Control and Water Conservation District, City of Yuba City, and the County of Butte
PM	particulate matter
PM _{2.5}	fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less
PM ₁₀	respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
ppb	parts per billion
ppm	parts per million
Proposed Project	approval of the four settlement agreements and contract amendments to SWP Contracts
PWD	Palmdale Water District
Reclamation	U.S. Bureau of Reclamation

SCWA	Solano County Water Agency
SFBAAB	San Francisco Bay Area Air Basin
SIP	State Implementation Plan
SO ₂	sulfur dioxide
SOD	South of Delta
Solano General Plans	general plans for Solano County and the Cities of Fairfield, Vallejo, Vacaville, and Suisun City
SPFC	State Plan of Flood Control
SR	State Route
SRA	State Recreation Area
SVAB	Sacramento Valley Air Basin
SWP	State Water Project
SWP Contracts	long-term water supply contracts
SWRCB	State Water Resources Control Board
TAF	thousand acre-feet
The Parties	DWR, the Plaintiff Water Contractors, and other SWP water contractors who intervened
U.S.	U.S. Highway
USFWS	U.S. Fish and Wildlife Service
UWMP	urban water management plan
Westside Districts	Berrenda Mesa Water District, Belridge Water Storage District, Lost Hills Water District, Wheeler Ridge–Maricopa Water Storage District, and Dudley Ridge Water District
WMP	water management program
WRMWSO	Wheeler Ridge–Maricopa Water Storage District
Yuba City	City of Yuba City

GLOSSARY

acre-foot—The volume of water (about 325,900 gallons) that would cover an area of 1 acre to a depth of 1 foot. This is enough water to meet the annual needs of one to two households.

allocation—The amount of project water (Table A) to be made available to a contractor, under the terms of its contract with the state. Allocation is typically reported as a percent of Maximum Table A Amounts and in most cases is final by May. It is determined through a process of estimating the amount of Table A available through stored water, forecasted hydrology, and the ability to deliver Table A to the contractors.

Annual Leased Table A Allocated Amount—The unused portion of the Butte County Maximum Table A Amount allowed to be leased to other State Water Project (SWP) contractors as determined by the lessee's allocation percentage.

Article 21 water—Water identified in an article of SWP long-term water supply contracts between the California Department of Water Resources (DWR) and each SWP water contractor. The article addresses non-Table A water that becomes available on an intermittent, interruptible basis. The subdivisions of the original article defined SWP water types; set priorities and procedures to reduce deliveries of Article 21 water; and provided provisions for schedules, rates, costs, and other considerations.

CALSIM—A computer model, jointly developed by DWR and the U.S. Bureau of Reclamation, that simulates existing and future operations of the SWP and Central Valley Project (CVP). The model simulates the operation of the SWP and CVP under a historically based hydrology (1922–2003), current or future facilities and land use, and assumed regulation. CALSIM II, the current version of the model, is considered the best available tool to simulate CVP and SWP operations and associated hydrologic effects using 81 years of hydrologic record data. CALSIM II uses a mass balance approach for the movement of water, and a linear optimizer to determine operations associated with hydrologic conditions in a given water year, water demand, and regulatory constraints. The model uses a monthly time step and operational variables inputs.

carryover water—Table A water that is allocated to a contractor in a given year, but is unused and stored in SWP supply reservoirs (when storage capacity is available) for use by that contractor in a following year. The water is temporarily stored or carried over in SWP reservoirs, primarily San Luis Reservoir. Article 56 of the SWP long-term contracts states that contractors must take delivery of carryover water before storage space in San Luis Reservoir is needed by the SWP, otherwise the carryover water is released and the storage capacity reverts to the SWP.

conference year—A year in which the then-current Table A water allocation, which may change during the year, is equal to or less than 20% of a Maximum Table A Amount.

cubic feet per second (cfs)—A measure of the rate at which a river or stream is flowing. The flow is 1 cfs if a cubic foot (about 7.48 gallons) of water passes a specific point in 1 second. A flow of 1 cfs for 1 day is approximately 2 acre-feet.

Delta inflow—The combined total of water flowing into the Sacramento–San Joaquin Delta (Delta) from the Sacramento River, San Joaquin River, and other rivers and waterways.

exceedance curve—A graphic plot that illustrates the percent of time a value is equaled or exceeded. For example, an exceedance curve of SWP deliveries of Table A water would show the frequency and duration that SWP contractors will receive a certain volume of water within a defined period of record.

Intervenors—The following SWP Contractors and/or interested parties: Metropolitan Water District of Southern California, Alameda County Flood Control & Water Conservation District, Zone 7, Alameda County Water District, Antelope Valley–East Kern Water Agency, Castaic Lake Water Agency, Central Coast Water Authority, Coachella Valley Water District, Kern County Water Agency, Mojave Water Agency, Palmdale Water District, San Geronimo Pass Water Agency, Santa Clara Valley Water District, and Tulare Lake Basin Water Storage District.

lease—For purposes of this document, Butte County’s agreements with South of Delta contractors involving temporary transfers exceeding 1 year, of Table A Amounts. This term does not refer to SWP water transfers as defined in the SWP long-term water supply contract.

Maximum Table A Leased Amount—The unused portion of the Butte County Maximum Table A Amount available for lease to other SWP contractor(s) for a minimum of 5 years.

plaintiffs—The following SWP contractors: Solano County Water Agency, Napa County Flood Control and Water Conservation District, City of Yuba City, and County of Butte.

South of Delta exports—Water pumped (“exported”) from the south Delta through the Harvey O. Banks Pumping Plant (SWP) and the C. W. “Bill” Jones Pumping Plant (CVP). The SWP’s Delta exports are the primary component of SWP deliveries to portions of the San Francisco Bay Area, San Joaquin Valley, and areas of southern California located south of the Tehachapi Mountains.

Table A water (Table A Amounts)—The volume of water that is allocated and delivered under SWP contract. The amount of SWP water made available to a SWP contractor for delivery during the year is determined by the annual allocation. Maximum Table A Amounts determine the maximum amount of water a contractor may request in any year from DWR. DWR and SWP contractors also use Table A Amounts as a basis for allocating some SWP operating costs among the contractors.

Turn-Back Water Pool Program—An SWP program administered under Article 56 of the SWP long-term contracts. Under the program, a SWP contractor may sell a portion of its allocated Table A water that it will not use, provided that (1) the contractor has not elected to store project water outside its service area in that year and (2) the contractor has not elected to carry over any of its Table A water allocated from a previous year under Article 12(e) or Article 56 of its long-term contract. Sales and purchases of turn-back pool water do not affect the allocation of Table A water to any SWP contractors.

water year—A hydrologic term that describes the period extending from October 1 through September 30 of the following calendar year. For example, October 1, 2010, through September 30, 2011, is the 2011 water year.

water-year type—As used in this analysis, a water year index based on Sacramento River and tributary runoff. Hydrologic conditions are described as wet, above normal, below normal, dry, or critical.

X2—The distance in kilometers from the Golden Gate Bridge up the axis of the Delta to where the near-bottom salinity isohaline is 2 parts per thousand.

1 INTRODUCTION

1.1 BACKGROUND

The California Department of Water Resources (DWR) is proposing to approve four settlement agreements and amendments related to the agreements to State Water Project (SWP) long-term water supply contracts (SWP Contracts) with four SWP water contractors: Solano County Water Agency (SCWA), the Napa County Flood Control and Water Conservation District (Napa), City of Yuba City (Yuba City), and the County of Butte (Butte County) (collectively, these four agencies, which are also plaintiffs in litigation filed against DWR, are referred to as the Plaintiff Water Contractors).

As described more fully in Chapter 2, “Project Description,” the Proposed Project is the approval of the four settlement agreements and contract amendments to SWP Contracts (Proposed Project). The proposed terms and conditions that form the basis of the Proposed Project stem from negotiations between DWR, the Plaintiff Water Contractors, and other SWP water contractors who intervened (Intervenors¹) (collectively referred to as “The Parties”) in the litigation filed by the Plaintiff Water Contractors against DWR. The Plaintiff Water Contractors claim they are entitled to a preference to SWP water deliveries under Water Code Section 10505 (county of origin statute), Water Code Section 11460 *et seq.* (area of origin statutes) and Article 18 of the SWP Contracts. The Parties in the litigation disagree over the meaning of the SWP Contracts, including how DWR must determine the availability of SWP supplies to each SWP contractor and whether each of the Plaintiff Water Contractors may obtain a priority right to SWP water to the extent asserted by the Plaintiff Water Contractors based on the area of origin statutes.² Although The Parties dispute the interpretation of the area of origin statutes and SWP Contracts, they desire to settle and terminate the disputes while not admitting to any of the legal claims raised in the litigation. Thus, The Parties negotiated and set forth the agreed upon proposed terms and conditions on term sheets, entitled “Agreements in Principle.” These Agreements in Principle form the basis for the Proposed Project. (See Appendix A for the text of the four Agreements in Principle.)

The California Environmental Quality Act (CEQA)³ requires state and local governmental agencies to consider the potential adverse environmental effects of projects over which they have discretionary authority before taking action on those projects and prohibits public agencies from approving projects as proposed if there are feasible alternatives or feasible mitigation measures available that would substantially lessen a proposed project’s significant environmental effects (Public Resources Code, Section 21002). Under CEQA, there is one lead agency, which is the public agency with primary responsibility over approval of the proposed project. DWR is the lead agency for this Proposed Project and has responsibilities that it must fulfill before committing itself to certain courses of action. DWR considers CEQA review to be a prerequisite to approving and executing the proposed settlement agreements, proposed SWP Contract amendments, and any DWR conveyance agreement for the delivery of a leased portion of Butte County’s Table A water to other SWP contractors authorized by the

¹ The Intervenors consist of the following SWP contractors: the Metropolitan Water District of Southern California, Alameda County Flood Control & Water Conservation District, Zone 7, Alameda County Water District, Antelope Valley-East Kern Water Agency, Castaic Lake Water Agency, Central Coast Water Authority, Coachella Valley Water District, Kern County Water Agency, Mojave Water Agency, Palmdale Water District, San Geronio Pass Water Agency, Santa Clara Valley Water District, and Tulare Lake Basin Water Storage District.

² Water Code Sections 11460 *et seq.* and 10505.

³ Public Resources Code Section 21000 *et seq.*; California Code of Regulations Title 14, Section 15000, *et seq.* (hereafter referred to as the CEQA Guidelines).

Agreement in Principle and the proposed Butte County settlement agreement and SWP contract amendment. The Proposed Project does not include temporary transfers of Table A Amounts.

Following completion of CEQA review and approval of the Proposed Project, The Parties will submit the executed settlement agreements to the Sacramento County Superior Court to request dismissal of the litigation with prejudice.

The Plaintiff Water Contractors are the SWP water agencies that would approve the proposed settlement agreements and contract amendments. These agencies are the responsible agencies under CEQA. The Intervenor would approve and be signatories to the settlement agreements to dismiss the litigation and are the responsible agencies under CEQA.

1.2 PURPOSE OF DOCUMENT

An initial study (IS) is prepared by a lead agency to determine whether a project may have a significant effect on the environment (CEQA Guidelines Section 15063[a]) and thus to determine which environmental document should ultimately be prepared. In accordance with CEQA Guidelines Section 15070(a):

public agency shall prepare...a proposed negative declaration or mitigated negative declaration...when:
(a) The Initial Study shows that there is no substantial evidence...that the project may have a significant impact on the environment, or (b) The Initial Study identifies potentially significant effects but revisions to the project plans or proposal are agreed to by the applicant and such revisions would reduce potentially significant effects to a less-than-significant level.

Under this circumstance, the lead agency prepares a written statement describing its reasons for concluding that implementing the Proposed Project would not have a significant effect on the environment and, therefore, does not require the preparation of an environmental impact report (EIR). An IS and negative declaration (ND) are the appropriate documents for compliance with CEQA requirements. This IS/ND conforms to these requirements and to the content requirements of Section 15071 of the CEQA Guidelines.

The primary purpose of this document is to present decision makers and the public with the environmental consequences of implementing the Proposed Project. This disclosure document is being made available to the public for a 30-day public review period, from July 19, 2013, through August 19, 2013

See Section 6, "IS/ND Distribution," for the locations of the libraries where this IS is also available for public review.

Written comments should be addressed to:

Ted Alvarez, Supervising Engineer
California Department of Water Resources
State Water Project Analysis Office
1416 Ninth Street, Room 1620
Sacramento, CA 95814
Telephone: (916) 653-6271
Fax: (916) 653-9628
E-mail: Ted.Alvarez@water.ca.gov

After comments are received from the public and reviewing agencies, DWR may (1) adopt the ND and approve the Proposed Project, (2) undertake additional environmental studies, or (3) abandon the project. If the project is approved, DWR could proceed to implement all or part of the project.

1.3 OTHER REGULATORY PERMITS AND APPROVALS

Before approval of the Proposed Project, DWR will determine whether additional federal, state, or local permits or regulatory approvals, such as those that would be required pursuant to the California or federal Endangered Species Acts, are needed to implement the terms and conditions of the proposed settlement agreements and associated SWP Contract amendments. In addition, implementing the Proposed Project would require that each of the Plaintiff Water Contractors approve and adopt the provisions of its respective settlement agreement through separate approval actions performed by the governing bodies of the water agencies that are signing the settlement agreement. As parties to the litigation, the Intervenor will also be approving the settlement agreement. (See footnote 2 above.) After that time, DWR would initiate a process to obtain settlement agreements and SWP Contract amendments approval by the DWR Director with each of the Plaintiff Water Contractors.

1.4 DOCUMENT ORGANIZATION

This IS/ND is organized as follows:

Chapter 1, “Introduction.” This chapter provides an introduction and background to the environmental review process and the purpose of the project. It describes the purpose and organization of this document and presents a summary of findings.

Chapter 2, “Project Description.” This chapter describes the purpose of and need for the Proposed Project, identifies project objectives, and provides a detailed description of the Proposed Project.

Chapter 3, “Environmental Checklist.” This chapter presents an analysis of environmental issues identified in the CEQA Environmental Checklist and states whether implementing the project would result in no impact, a less-than-significant impact, a less-than-significant impact with mitigation incorporated, a potentially significant impact, or a significant and unavoidable impact.

Chapter 4, “References.” This chapter lists the references used in preparation of this IS/ND.

Chapter 5, “List of Preparers.” This chapter identifies the report preparers.

Chapter 6, “IS/ND Distribution.” This chapter identifies the names and addresses of all parties who received copies of the IS and proposed ND.

This IS also includes ~~two~~ four appendices: Appendix A, “Agreements in Principle;” ~~and~~ Appendix B, “DWR Consistency Determination and Energy Consumption and GHG Emission Estimates;” Appendix C, “Comments Received on the Initial Study/Proposed Negative Declaration;” and Appendix D, “Responses to Comments.”

A guide to acronyms and other abbreviations and a glossary of terms specific to the Agreements in Principle and settlement agreements and commonly used in SWP Contracts is presented after the Table of Contents.

2 PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

The Proposed Project consists of approving four separate settlement agreements and SWP Contract amendments between DWR and each of the Plaintiff Water Contractors and approving the settlement agreements by The Parties to the litigation. Implementing the provisions of the settlement agreements would result in modifying the four Plaintiff Water Contractors' SWP allocations to improve SWP water delivery reliability and modify the volume of SWP water that may be delivered to each of the Plaintiff Water Contractors that had been reduced as a result of export limitations imposed under regulatory requirements, such as pursuant to the California and federal Endangered Species Acts. The Proposed Project would not change the imposed export limitations and would not directly induce growth not already planned within current local land use plans. Water provided through implementation of the settlement agreements could remove an obstacle to future growth contemplated within current local land use plans; however, such growth and development would be subject to future environmental impact analysis by each Plaintiff Water Contractor at the time such development is proposed. DWR will continue to meet existing regulatory requirements, including applicable water quality limits and measures defined in biological opinions (BOs) for designated species.

The additional SWP water to be delivered to the Plaintiff Water Contractors would consist of SWP water that is presently (1) available as Sacramento–San Joaquin Delta (Delta) outflow, (2) available as exports South of the Delta (SOD), or (3) diverted by Plaintiff Water Contractors as a different SWP water type. The exact mix of sources would depend on hydrologic conditions and regulatory restrictions present at the time of delivery. The SWP conveys water from the Feather River watershed and from other Central Valley tributaries through the Delta to SOD areas for agricultural and municipal/industrial uses.

With implementation of the Proposed Project, SWP water delivery allocations for SCWA, Napa, Yuba City, and Butte County would be determined using a revised SWP allocation procedure that would modify the SWP allocation volume to the service areas of only these water agencies located North of the Delta (NOD). The new allocation to SCWA, Napa, and Yuba City would be established by a method referred to as the NOD Allocation. In addition, DWR would establish a program to allow Plaintiff Water Contractors SCWA, Napa, and Yuba City to borrow water from the SWP to supplement the existing Table A SWP water delivery schedule to SCWA, Napa, and Yuba City during periods when demand exceeds other SWP water supplies (referred to as an “Advanced Table A Program”). Butte County does not have an Advanced Table A Program. The new allocation to Butte County would be described in a new BC Table.

As described within the IS, the contract modifications include conditions that would ensure that potential impacts on supply for the other SOD SWP contractors would be less than significant. Further, under Butte County's settlement agreement, Butte County would be able to lease the unused portion of its Maximum Table A Amount to other SWP contractors under separate lease agreements for a minimum of 5 years with an option(s) to extend.

In no case would any Plaintiff Water Contractor's current Annual Table A Amount be exceeded if the Proposed Project were implemented. Should Butte County increase SOD leases to other SWP contractors, this increase would be separate and apart from the Proposed Project and would not include any additional water from the new Butte County Allocation that is part of any settlement.

Establishing an Advanced Table A Program would allow the Plaintiff Water Contractors to borrow from their future allocated Table A water to achieve the up to certain Annual and Cumulative Advanced Table A Balances. These contract amendments would remain in force through the duration of the SWP Contracts, terminating in 2035, or any renewal thereof.

Separate lease agreements for a portion of Butte County's annual Table A Amounts between Butte County and Palmdale Water District (PWD) and between Butte County and Berrenda Mesa Water District (BMWD), Belridge Water Storage District (BWSD), Lost Hills Water District (LHWD), Wheeler Ridge–Maricopa Water Storage District (WRMWS), and Dudley Ridge Water District (DRWD) (collectively referred to as the Westside Districts) have been approved for 2012 and 2013 by DWR after being subject to a CEQA analysis. PWD and DRWD as CEQA lead agencies have analyzed the proposed Butte County long-term leases of a portion of Butte County's annual Table A Amounts to PWD and the Westside Districts, for the years 2012 through 2013, 2014 through 2021, and options for multiple additional 5-year extensions thereafter, in compliance with CEQA (DRWD 2012: State Clearinghouse #2012061062 and PWD 2012: State Clearinghouse #2012061063, which are incorporated herein by this reference). The lease agreements for the years 2014 through 2021 and any 5-year extension thereof are subject to approval of conveyance agreements by DWR and the approval of the final settlement agreements by all Parties and interested parties. To keep the total potential lease terms within the current duration of the SWP long-term water supply contracts, this CEQA analysis shall assume that all lease extensions will terminate on December 31, 2035.

Implementing the Proposed Project would not involve any construction activities. SWP water addressed under each settlement agreement would be delivered through existing SWP infrastructure under current SWP permits and licenses.

2.2 PROJECT LOCATION

The Proposed Project involves the existing SWP water storage facilities, conveyance facilities, and delivery area. The SWP conveys water originating in the Feather River watershed and stored in Lake Oroville and from other Central Valley tributaries to SWP water contractors located in areas both north and south of the Delta. Exhibit 2-1 illustrates the major features of the SWP and their location within the state of California.

SCWA's SWP service area consists of all of Solano County. SCWA has either contracted to serve in the future or currently serves the cities of Fairfield, Dixon, Benicia, Vallejo, Rio Vista, Suisun City, and Vacaville (Exhibit 2-2). At present, no SWP water supplies are delivered to Rio Vista, Dixon, or Suisun City. The SCWA service area lies mostly in the lower Sacramento River basin and adjacent tributary sloughs. The service area also includes the lower portion of Putah Creek and several smaller local streams, such as Suisun Creek.

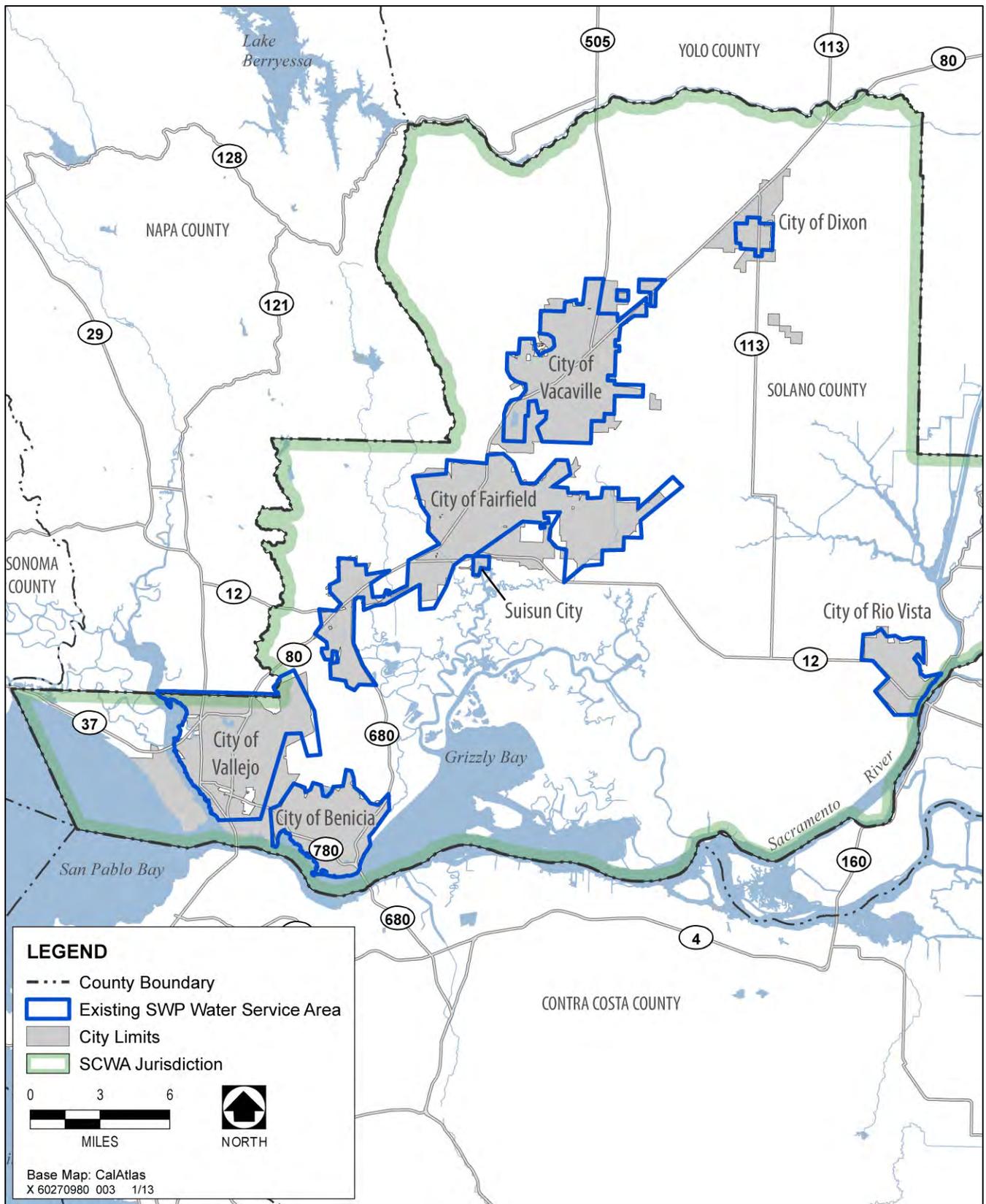
Napa's service area consists of all of Napa County. Napa currently serves the Cities of Napa, American Canyon, and Calistoga (Exhibit 2-3). In Napa County, the Cities of Yountville and St. Helena also receive SWP water under direct contracts with the City of Napa. These contracts would not change as result of implementing the Proposed Project.



Source: DWR 2012a

Exhibit 2-1

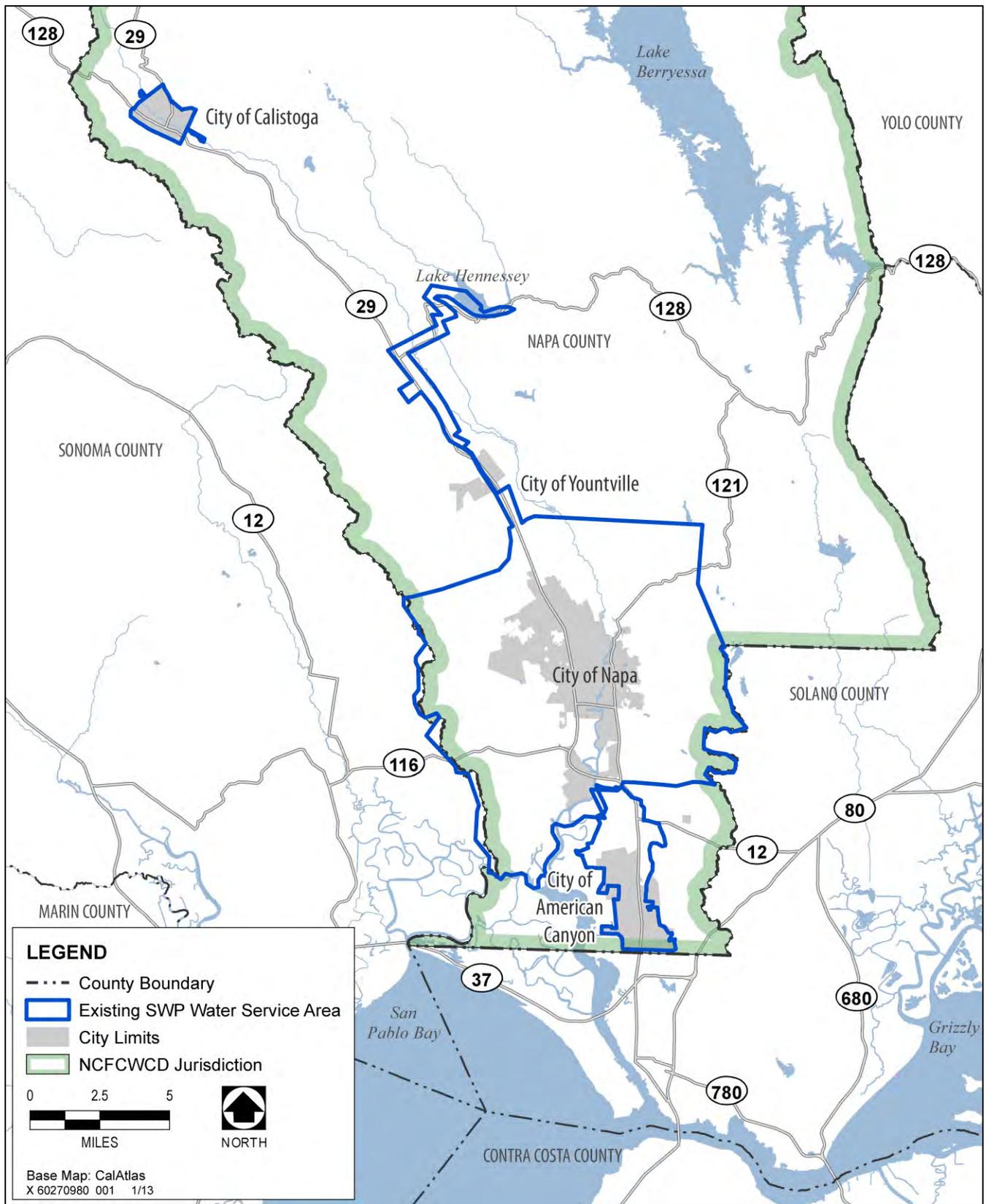
State Water Project Contractors Service Areas



Source: Solano Agencies 2005

Exhibit 2-2

Solano County SWP Water Service Areas



Source: City of Napa 2011

Exhibit 2-3 Napa County Flood Control and Water Conservation District SWP Water Service Areas

The Yuba City SWP water service area extends to the incorporated city boundary, which is located entirely in the lower Feather River Basin (Exhibit 2-4).

Butte County's SWP service area is the entire county. Within that area, Butte County serves both the Oroville District of California Water Service Company (Cal Water) and Del Oro Water Company and, under three separate 2012–2013 approved conveyance agreements with DWR, leases a portion of its annual Table A Amount to PWD and the Westside Districts (Exhibits 2-5 and 2-6). The existing in-county water service lies mostly in the upper Feather River Basin with a small portion in the lower Sacramento River Basin.

2.3 PROJECT OBJECTIVES

The purpose of the Proposed Project is to implement the proposed terms and conditions as described in the Agreements in Principle through approval of the four settlement agreements and four amendments to improve reliable delivery of SWP water to the Plaintiff Water Contractors and to settle litigation among The Parties.

To meet this purpose, the Proposed Project would achieve three objectives:

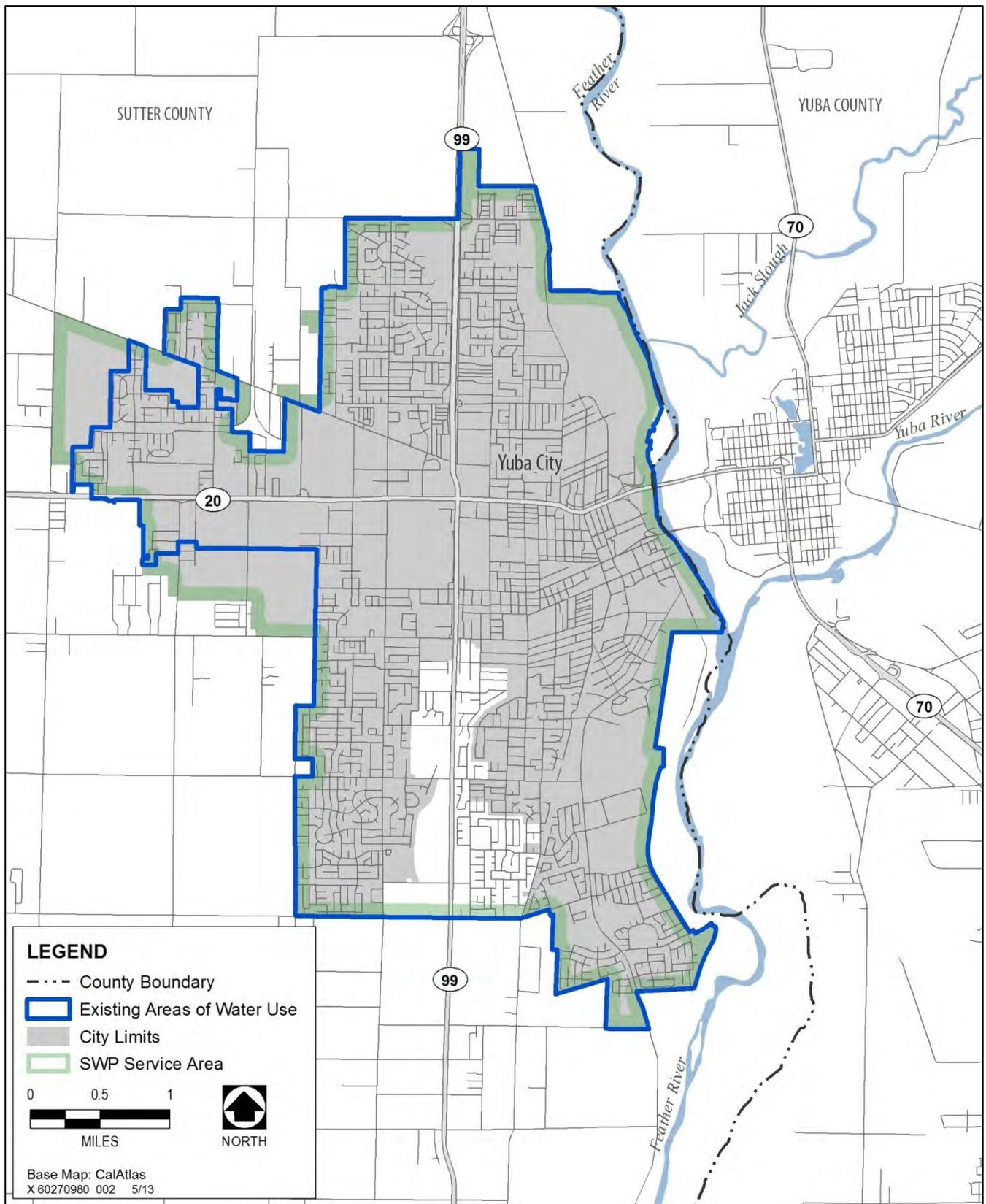
- (1) Modify the existing Table A allocation method to increase delivery of SWP water supplies to the four Plaintiff Water Contractors by modifying their Table A allocation where it might have been restricted by operational or regulatory restrictions that affect SWP water availability to only SOD export facilities (i.e., establish new NOD Allocation and BC Table).
- (2) Authorize DWR to approve conveyance agreements to enable Butte County to lease the unused portion of its annual Table A Amount to other SWP contractors for a minimum of 5 years and options for multiple additional 5-year extensions thereafter subject to compliance with CEQA.
- (3) Modify existing Table A allocations to deliver additional SWP water supplies during dry water years to SCWA, Napa, and Yuba City through a borrowing program (Advanced Table A) that would be repaid to the SWP in subsequent years, depending on conditions.

2.4 DESCRIPTION OF SWP FACILITIES AND OPERATIONS

2.4.1 BACKGROUND

The SWP is the largest state-built, multipurpose, user-financed water project in the United States. More than two-thirds of California's residents—25 million people—receive at least part of their water from the SWP. SWP water also supplies thousands of industries and irrigates approximately 750,000 acres of California farmland.

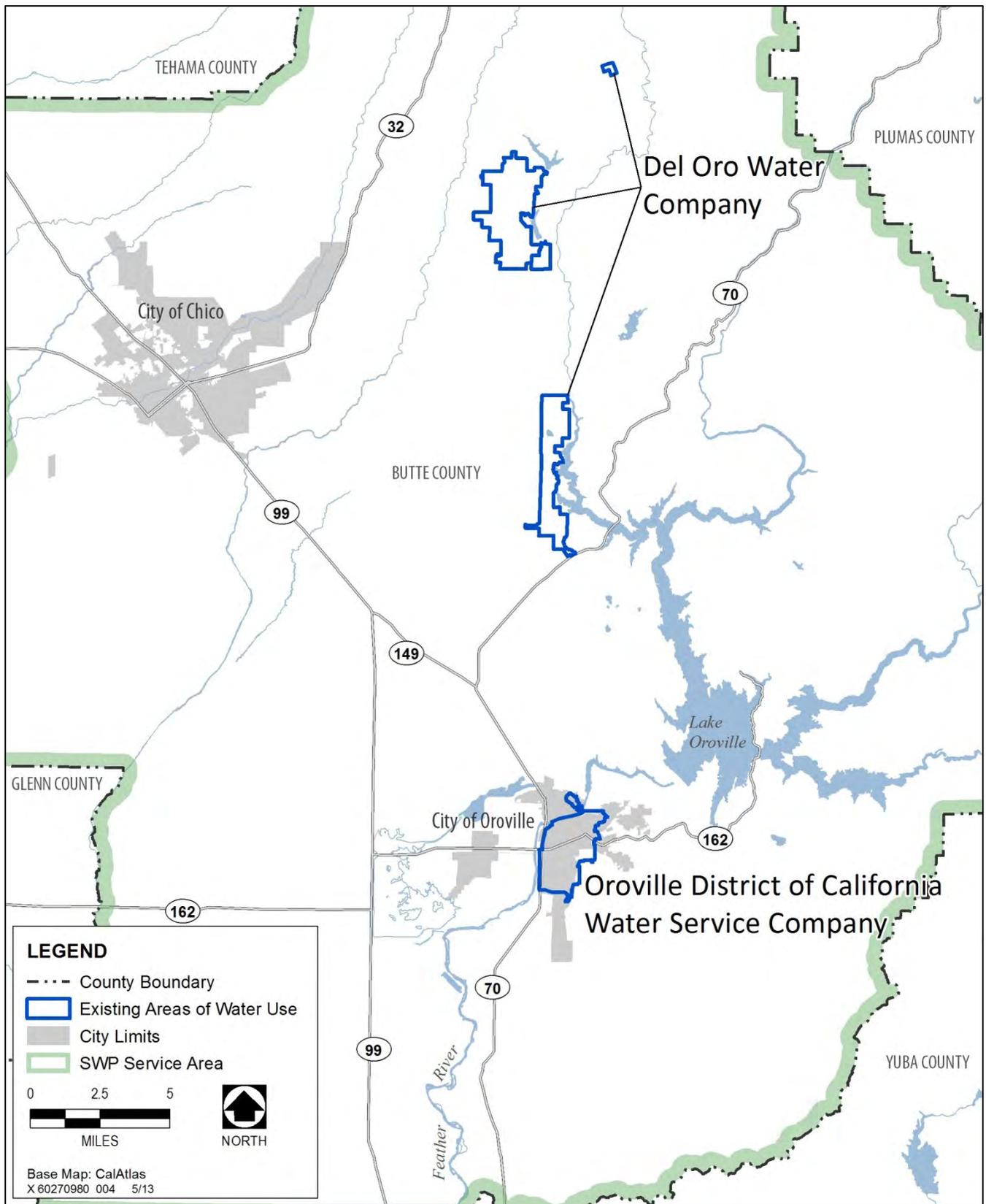
The primary purpose of the SWP is to provide a water supply—that is, to divert and store water during wet periods in northern and central California and distribute it to areas of need in northern California, the San Francisco Bay Area, the San Joaquin Valley, the central coast, and southern California. Other SWP purposes include flood control, power generation, recreation, fish and wildlife enhancement, and water quality improvement in the Delta.



Source: City of Yuba City 2011

Exhibit 2-4

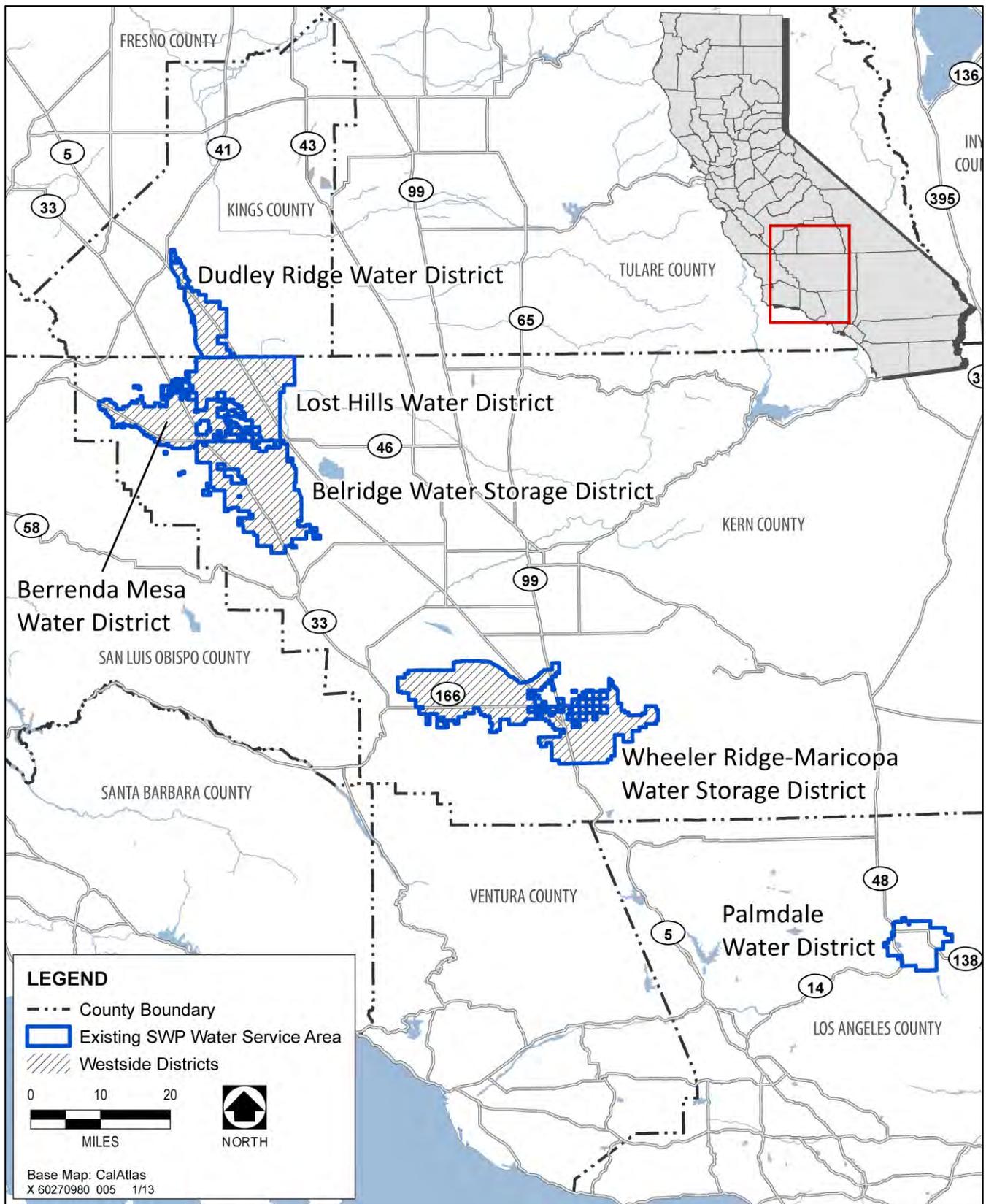
Existing Water Service Area in Yuba City



Source: California Water Service Company 2011

Exhibit 2-5

Existing Water Service Areas in Butte County



Sources: DRWD 2012; PMD 2012

Exhibit 2-6

Butte County SWP Long-Term Transfer Agreement Water Service Areas

2.4.2 STATE WATER PROJECT FACILITIES

The SWP includes 33 storage facilities, 21 reservoirs and lakes, 20 pumping plants, four pumping-generating plants, five hydroelectric power plants, and approximately 700 miles of canals and pipelines. Exhibit 2-1 shows the primary SWP facilities.

The SWP delivers water supplies to 29 water contractors located throughout the state. Of the SWP's contracted water supply, 70% goes to urban users and 30% goes to agricultural users (DWR 2012a). As shown in Exhibit 2-1, most of these contractors are located in southern California, corresponding to the large urban populations located in that part of the state.

2.4.3 STATE WATER PROJECT OPERATIONS

Water Storage and Conveyance

With a capacity of approximately 3.5 million acre-feet, Lake Oroville is the largest SWP storage facility. The SWP also has state-issued water rights to the flows from Central Valley streams that flow into the Delta. SWP deliveries are a combination of these stream flows and Oroville Dam releases into the Feather River, which converges with the Sacramento River north of Sacramento. The Sacramento River flows into the Delta, where it mixes with marine water from the San Francisco Bay. From the Delta, some of this water is pumped by the Barker Slough Pumping Plant into the North Bay Aqueduct for municipal use in the Napa and SCWA service areas.

The Harvey O. Banks Pumping Plant (Banks Pumping Plant), the primary SWP pumping plant, is located in the south Delta in Alameda County. The pumps at the Banks Pumping Plant lift Delta water stored in the Clifton Court Forebay into the 444-mile-long California Aqueduct. At Bethany Reservoir, some SWP water is diverted from the California Aqueduct into the South Bay Aqueduct, which serves urban and agricultural uses in Alameda and Santa Clara Counties.

SWP water in the California Aqueduct flows into the San Luis Joint-Use Complex located in Merced County, which is jointly owned by the SWP and the federal Central Valley Project (CVP). Among the facilities at the complex is San Luis Reservoir, which has storage space for more than 2 million acre-feet of water. Generally, water is pumped into San Luis Reservoir from late fall through early spring and is stored before being released back into the California Aqueduct to meet the higher summertime water demands of SWP and CVP contractors.

After release from the San Luis Joint-Use Complex, water travels through the central San Joaquin Valley via a jointly owned federal/state portion of the California Aqueduct and the Delta-Mendota Canal. Along the way, deliveries are made to San Joaquin Valley contractors of both the SWP and the CVP. Near Kettleman City, in Kings County, the SWP Coastal Branch Aqueduct splits off to serve SWP contractors in San Luis Obispo and Santa Barbara Counties. The California Aqueduct continues southeast until, at the base of the Tehachapi Mountains, it reaches the A. D. Edmonston Pumping Plant, which lifts the SWP water over the mountains.

After crossing the mountains, the SWP water splits into two branches, the West Branch and East Branch, and is delivered to SWP contractors in southern California. The southernmost SWP facility, located at the end of the East Branch, is Lake Perris in Riverside County.

Restrictions on Operations and Water Delivery

In the SWP conveyance system, the Delta is the critical link between the water supplies in the Sacramento Valley and the water demands of, and deliveries to, the rest of the Central Valley, San Francisco Bay Area, and southern California. Physically, the Delta is the focal point for water distribution in California because most of the SWP contractors are located at points south of the Delta.

The SWP's ability to pump water from the Delta is affected by the physical size and capacity of the pumps at the Banks Pumping Plant. As described below, the Delta is also affected by numerous factors that interact to affect SWP operations and water deliveries, including:

- ▶ Delta inflows (i.e., the combined total of water flowing into the Delta from the Sacramento River, San Joaquin River, and other rivers and waterways),
- ▶ beneficial uses and water rights,
- ▶ Delta water quality standards,
- ▶ regulatory requirements, and
- ▶ concurrent CVP operations and pumping.

SWP operations are regulated by the State Water Resources Control Board (SWRCB). The SWRCB permits the appropriation of water subject to a set of criteria that protect beneficial uses by the environment as well as other legal water right holders. In addition, the SWRCB has adopted water quality limits to protect various beneficial uses and resources as provided in Water Right Decision 1641 (D-1641). D-1641 was issued in December 1999 (with a revised version issued in March 2000) to implement the 1995 *Water Quality Control Plan for the San Francisco Bay/Sacramento–San Joaquin Delta* (1995 WQCP) (SWRCB 1995). D-1641 assigned primary responsibility for meeting many of the water quality and other objectives established in the 1995 WQCP to the SWP and the CVP. To meet some of these objectives contained in the WQCP, D-1641 curtails SWP and CVP pumping operations during certain parts of the year. For example, D-1641 imposes limits on the ratio of SWP and CVP exports to total inflow into the Delta. This “export-inflow ratio” varies by time of year.

Regulatory requirements based on recent BOs issued by the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) for CVP and SWP operations are particularly important factors affecting SWP operations. Both of these BOs have directly and substantially affected SWP operations and pumping levels in recent years. They specifically include terms that directly or indirectly limit the amount of CVP and SWP Delta pumping under certain conditions. In comparison to prior years, SWP water deliveries were reduced by the operational restrictions contained in these BOs.

SWP Table A Allocations

The SWP was created in conjunction with the establishment of long-term contracts between DWR and 29 urban and agricultural water agencies in various locations within California, including the Plaintiff Water Contractors' service areas. The contracts are essentially uniform and will expire in or around 2035 unless renewed or extended.

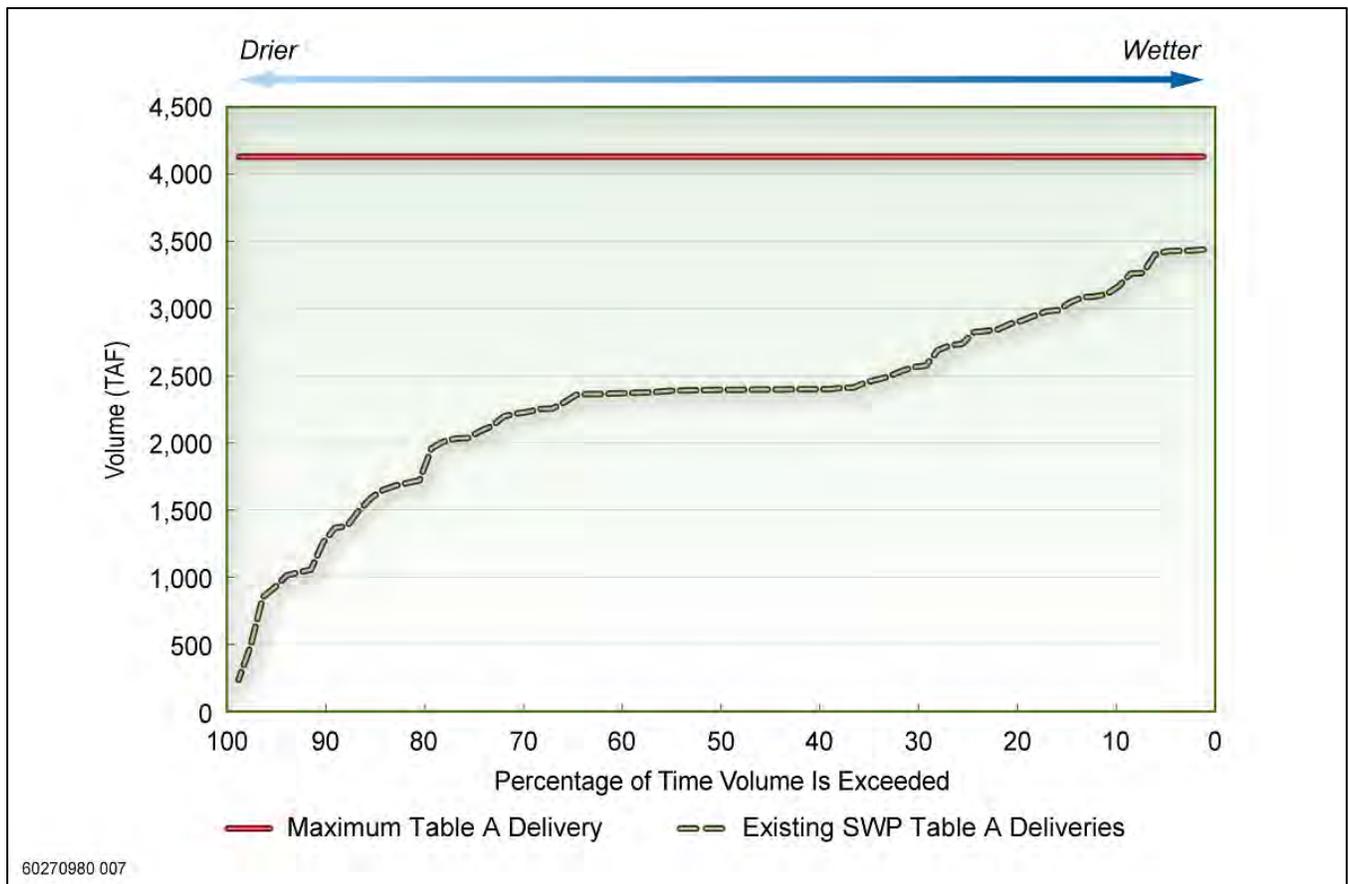
Under the terms of their long-term water supply contracts with DWR, the 29 SWP contractors receive specified amounts of water from the SWP each year, called “annual allocations” and based on each contractor’s Table A Amount. The SWP’s long-term water supply contracts define the terms and conditions governing water delivery and repayment of project costs. In return for the water, the SWP contractors repay principal and interest on both general obligation bonds that initially funded construction of the SWP and revenue bonds that paid for additional facilities. The contractors also pay all costs, including labor and power, to maintain and operate project facilities. They also pay transportation charges based on the costs of transportation facilities between the Delta and each contractor’s water delivery point.

All SWP water contracts included an estimate of the date that SWP water would first be delivered and a schedule of the amount of water the contractor could expect to be delivered annually. That amount of SWP water established in each contractor’s annual Table A Amount was designed to increase gradually until the maximum for that SWP contractor was reached. As a result of amendments to the water supply contracts in the 1990s, the current combined Maximum Table A Amount is 4,173 thousand acre-feet (TAF) per year. Of this amount, 4,133 TAF per year is the Maximum Table A Amount available for delivery from both the North and South Delta, although this amount does not include SWP water available to the contractors under Article 21 of the SWP water supply contracts, which is discussed below. It is estimated that by 2031, the maximum amount of SWP Table A water will be requested every year.

The Maximum Table A Amount listed in any particular contract is not a guarantee that the SWP contractor will receive that amount of SWP water. The Maximum Table A Amount is the reference number that is used in an allocation process each year that defines an individual contractor’s portion of the total Table A water supplies available (and also used as a factor in allocating each contractor’s share of the SWP’s costs). In other words, each SWP contractor will receive a certain percentage of its Maximum Table A Amount in their contracts, depending on hydrologic conditions and SWP water available in the system.

The hydrologic conditions occurring in a specific water year and the contractors’ demand levels are among the factors involved in determining the amount of Table A water that will be delivered by DWR to each contractor. At present, each SWP water contractor is subject to the same percent water allocation of Table A each year, regardless of its location on the SWP conveyance system. Although the same percentage allocation is used to allocate all SWP Table A Amounts, some factors defining this percent allocation have a direct effect on the ability to deliver water to SWP water contractors south of the Delta but do not have the same direct effect on water deliveries to SWP contractors north of the Delta.

Exhibit 2-7 shows the existing SWP Table A delivery probability (DWR 2012a). This exhibit depicts the simulated volumes of SWP water available for delivery based on more than 81 years of historical hydrologic record and existing regulatory restrictions affecting operation of SWP facilities. The amount of SWP water that can be expected to be delivered with a certain frequency or probability is commonly referred to as the water delivery reliability. To analyze this exhibit, the reader should select a specific water volume to be delivered and identify the corresponding probability of its occurrence. For example, the SWP is capable of delivering 3,049 TAF of Table A supplies in up to 12 years (15%) in the 81-year period of record. Deliveries of greater SWP water volume would be available only during relatively wetter years and when Delta water quality requirements and operational restrictions do not interfere with SWP operations. Larger deliveries of SWP water occur on a less frequent and less reliable basis.



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Source: DWR 2012a, adapted by AECOM in 2012

Exhibit 2-7

Existing SWP Table A Delivery Probability

Conversely, during drier years, deliveries of less than approximately 1,721 TAF would occur about 20% of the time (marked at the 80th percentile in Exhibit 2-7), resulting from reduced SWP water availability and requirements for Delta water quality and other anticipated regulatory restrictions.

Other Available SWP Water

Table A water is given first priority over other types of SWP water deliveries to the SWP contractors. Each long-term water contract describes several types of SWP water that are available to SWP contractors to supplement Table A water: “Article 21” water, carryover water, and turn-back pool water. (See the Glossary for definitions of these terms.) Most of the SWP water provided to the SWP contractors is composed of a combination of Table A water and Article 21 water.

The Article 21 Water Program allows an SWP water contractor to take delivery of SWP water over the approved and scheduled Table A Amounts for the current year. Article 21 water is available for delivery when certain conditions exist on a short-term basis as determined by DWR. For SWP water contractors located SOD, Article 21 water is typically available when all of the following conditions are met: current Table A demand is fully met; the SWP share of San Luis Reservoir is full or projected to be full in the near future; other SWP reservoirs south of the Delta are at their storage targets, or the conveyance capacity to fill the reservoirs is maximized; the Delta is in excess condition; and the Banks Pumping Plant’s export capacity is beyond that which is needed to meet

current Table A and other SWP operational demands (Reclamation 2008:2-70). On average, over the period of 1961–2006, the volume of Article 21 water delivered to SWP contractors equaled approximately 12% of the total Table A deliveries (DWR 2012b). For the four Plaintiff Water Contractors located NOD, Article 21 water has typically been made available when the Delta is in excess conditions, independent of SOD export conditions. As a result, the four Plaintiff Water Contractors are eligible to receive Article 21 water for longer time periods than SOD contractors.

Pursuant to provisions in the SWP water supply contracts, SWP contractors may offer a portion of their allocated Table A water supplies that exceeds their SWP water demand to the turn-back pool, where other SWP contractors may purchase this supply. If SWP contractors do not put excess Table A water into the turn-back pool, they may carry over their allocated Table A water for use in the following year, provided that there is available storage capacity in SWP reservoirs. Should the contractor be unable to take delivery of the carryover supply before the SWP requires the storage space, the carryover Table A water would be released to enable SWP use of the needed reservoir storage and the carryover Table A water would no longer be available for delivery.

Implementing the Proposed Project would restrict the Plaintiff Water Contractors from selling the increment of the NOD Allocation above the SOD allocation to the turn-back pool. Subject to certain limitations described below, Butte County would be able to lease the portion of its BC Table Allocation not used to meet in-county demands, referred to as the Maximum Table A Leased Amount, to other SWP water contractors. That unused portion may have otherwise gone to the turn-back pool annually, or may have been carried over for Butte County’s use in the following year. The Butte County lease could reduce the amount of SWP water available to other SWP water contractors purchasing supplies that otherwise could have been available from the turn-back pool; however, the leased supplies would still be available to the SWP contractors that leased the Table A water from Butte County.

Agreement for the Coordinated Operation of the Central Valley Project and the State Water Project (“COA”)

On November 24, 1986, pursuant to the Act of Congress approved October 27, 1986, P.L. 99-546, and pursuant to the California Central Valley Project Act and the California Water Resources Development Bond Act, the Bureau of Reclamation and DWR entered into an agreement for the Coordinated Operation of the Central Valley Project and the State Water Project. Within this COA, “Sacramento Valley Inbasin uses” are legal uses of water in the Sacramento Basin including the water required under the provisions of State Water Resources Control Board water quality standards for the Sacramento-San Joaquin Delta (hereafter In-basin Use).

DWR and the Bureau share responsibility for meeting In-basin Use with storage withdrawals during balanced water conditions. Each party’s responsibility for making available storage withdrawals to meet In-basin Use of storage withdrawals shall be determined by multiplying the total In-basin Use of storage withdrawals by the following percentages: Bureau of Reclamation: 75%; DWR 25%.

The Bureau and DWR also share responsibility during balanced water conditions when unstored water for export is available. Each party’s responsibility to meet In-basin Use and exports shall be determined by: (1) Allocating the sum of United States stored water, State stored water and the unstored water for export by the following percentages: Bureau of Reclamation: 55 %; DWR 45%.

Additionally, with certain exceptions, the parties account for accumulated responsibilities during balanced conditions.

The proposed project will not impact the COA because all deliveries will be made from SWP water. The proposed project is not intended to redefine the terms of the COA nor impact the COA-defined In-basin Use demands.

DWR is committed to develop a process, in coordination with the Bureau, that will quantify any changes in deliveries to SWP water supply contractors resulting from the proposed project, and will incorporate this information into the existing COA accounting process in a way that does not adversely affect CVP operations and/or deliveries. This document will be developed jointly through the CVP and SWP operations offices.

2.5 DESCRIPTION OF THE SETTLEMENT AGREEMENT ACTIONS

2.5.1 CHANGES TO TABLE A ALLOCATION AND WATER DELIVERIES

CALSIM is a systems optimization model that simulates the operations of the CVP and SWP given various system constraints and demands. CALSIM II is the primary operations and planning model for CVP and SWP operations and is considered the best available tool to simulate CVP and SWP operations and associated hydrologic effects using 81 years of hydrologic record data. CALSIM II uses a mass balance approach for the movement of water, and a linear optimizer to determine operations associated with hydrologic conditions in a given water year, water demand, and regulatory constraints. The model uses a monthly time step and operational decisions variables are input in the same time interval.

A complex relationship exists between the various factors affecting model output: the simplification of complex relationships, errors in mathematical description or the numerical methods that are applied, inappropriate parameter values, errors in input data and boundary conditions, and errors in measurements from field observations. As a result, a level of uncertainty is inherent in the modeling results. Uncertainty stems from the inadequacy of information and inability to verify certain assumptions, as well as from the variability of natural processes.

The best use of CALSIM is in a comparative mode where an analysis looks at the change in parameters between two scenarios. These values are typically reported as average over all years and then broken down into year-type averages. The magnitude of changes being introduced to the Sacramento–San Joaquin Bay-Delta system by the proposed project is smaller than the normal precision of the model. Therefore, standard simulations using CALSIM result in system changes that reflect model error rather than a true reflection of expected system changes attributable to implementing the proposed project. To correct for this error, several model parameters were stabilized between baseline and proposed project model runs. The stabilized parameters were Oroville, Shasta, Folsom, and San Luis storages, as well as diversions to senior water rights holders on the Feather River. This procedure better reflects actual expected implementation of the proposed project and forces system changes to other system parameters that are anticipated to change with implementation of the proposed project. Most notably, these parameters include Delta outflow and SOD deliveries.

Modeling results provide information about changes to reservoir storage, river flow, and water supply deliveries throughout the system. However, certain limitations in modeling results are specific to each of these parameters of interest. For example, mean monthly flows and reservoir storage volumes are calculated as end-of-month values.

The monthly time step of CALSIM II also requires day-weighted monthly averaging to simulate minimum instream flows, adaptive management actions, export reductions, and X2-based operations that occur within a month. This averaging can also either underestimate or overestimate the amount of water that would be needed for these actions or that would otherwise be available for export from the Delta.

This analysis has compiled the CALSIM II results for each of the 81 years of record and reports them as averages for each of five water-year types (wet, above normal, below normal, dry, and critical) and an average over all years. Minimum and maximum conditions found in any specific year or month within the 81-year period of record are not considered for the reasons stated previously. The modeling results reported in this document enable a reasoned analysis of changes to hydrologic elements affected by the SWP operations.

On October 1 of each year, the State Water Contractors provide to DWR's SWP Analysis Office a 30%, 50%, 60%, and 100% Table A water delivery schedule for the upcoming year. DWR Operations uses these delivery patterns in its initial water supply studies. Throughout the year as the water supply allocation and/or demands change, these delivery patterns are revised by the State Water Contractors, submitted to the SWP Analysis Office, and used in the monthly revisions of the water supply allocation. Upon completion of each water supply study, DWR Operations provides a water supply allocation recommendation to the Director, who in turn determines each water supply allocation, typically to the nearest 5%.

Because DWR typically allocates SWP water in increments of 5% (about 105 TAF), modeled estimated changes in SOD deliveries that are substantially less than this increment would not likely be realized in actual operations. The precision of SWP operations is much less than that which can be estimated by the CALSIM II model. Because of variations in daily hydrology, hydrodynamics, and demands, it is difficult to operate the SWP at the level of precision employed by CALSIM II on a monthly basis.

CALSIM II does not include short-term or long-term water leases in these simulations. Therefore, the long-term lease of Butte County water supplies is not included in the CALSIM II simulation used in this analysis. However, because the water composing the long-term Butte County water lease is now classified as Table A water that has been previously transferred to the turn-back pool for purchase by other SWP water contractors typically located SOD, no change to the volume of water conveyed through the Delta would occur. Only the location where water is used SOD would change as a result of implementing the Butte County water lease, and other SWP water contractors purchasing turn-back pool supplies would no longer acquire up to 24 TAF from that source. Over the period of 2001 through 2010, the turn-back pool supplied 3.2 TAF to 45.2 TAF and made it available to other SWP water contractors, depending on supply deficiencies and demands in each water year (DWR 2012b).

NORTH OF DELTA ALLOCATION

Based on a computer simulation of 81 years of hydrologic record using the CALSIM model, the average annual additional SWP water supply associated with implementing the proposed NOD Allocation that would become available to the Plaintiff Water Contractors totals approximately 13.6 TAF. The specific estimated delivery to each Plaintiff Water Contractor is shown in Table 2-1.

Table 2-1 Proposed Increase in Average Annual SWP Water Deliveries	
Plaintiff Water Contractor	Increased Average Annual Water Delivery (TAF)
Solano County Water Agency	6.5
Napa County Flood Control and Water Conservation District	5.3
Yuba City	1.8
Note: TAF = thousand acre-feet. Source: Data provided by DWR in 2013 based on CALSIM modeling	

Implementing the Proposed Project would increase SWP water deliveries to the SCWA, Napa, and Yuba City service areas by about 23–29% during average water year conditions; more importantly, it would increase SWP water deliveries to these service areas by about 33–46% during periods when they are receiving below-normal SWP water supplies.

Table 2-2 presents the increase of SWP water deliveries that would result from implementing the Proposed Project in various water-year types for SCWA, Napa, and Yuba City. As shown, the increase in deliveries would vary by water-year type. Average deliveries to the service areas of these water contracting agencies would increase by about 19–21% in wet years, 23–29% in average years, 14–31% in dry years, and 11–20% in critical years.

BC TABLE ALLOCATION (BUTTE COUNTY)

Implementing a new SWP water allocation for Butte County would involve adopting a new allocation schedule referred to as the BC Table Allocation, as shown in Table 2-3 columns (1) and (3). The new BC Table would replace the existing Table A for Butte County SWP water allocation schedule but would not change the existing Maximum Table A Amount of 27,500 af (Table 2-3). The BC Table would increase the Butte County allocation by 30% when the SOD allocation is between 20% and 60% and then would increase the Butte County allocation to 100% when the SOD allocation is between 60% and 100%.

The volume of Table A water available for Butte County’s in-county use would correspond to the volume shown in the BC Table. Any use of Butte County’s Table A water outside of Butte County by way of transfer, exchange, lease, or storage would be subject to the allocation of the entity receiving the water, not the BC Table allocation. Any additional water resulting from Butte County’s increased allocation under the BC Table would not be available for storage outside of Butte County’s service area, for sale to the turn-back pool, or for sale through any multiyear purchase program that may be developed in the future.

Under Butte County’s settlement agreement, Butte County would be able to lease the unused portion of its Maximum Table A Amount to other SWP water contractors under separate lease agreements. The leasing program is discussed below.

Butte County Leased Water

Butte County would be allowed to lease the unused portion of its Maximum Table A Amount to other SWP water contractors, referred to as the Maximum Leased Table A Amount. The Maximum Leased Table A Amount would

**Table 2-2
Proposed Increase in Average Annual SWP Water Deliveries by Water-Year Type**

Water-Year Type	Existing Table A Allocation Deliveries (TAF)	Proposed NOD Allocation Deliveries (TAF)	Additional Water to Be Delivered (TAF)	Percent Increase in Annual Deliveries
Solano County Water Agency				
Average	28.5	35.0	6.5	23
Wet	39.3	47.3	8.0	20
Above normal	34.3	44.2	9.9	29
Below normal	30.1	40.1	9.9	33
Dry	20.2	23.0	2.8	14
Critical	10.3	12.0	1.7	17
Napa County Flood Control and Water Conservation District				
Average	18.4	23.7	5.3	29
Wet	23.7	28.8	5.0	21
Above normal	21.1	28.7	7.5	36
Below normal	19.2	27.4	8.3	43
Dry	14.8	19.7	5.0	34
Critical	8.7	9.7	1.0	11
Yuba City				
Average	6.2	8.0	1.8	29
Wet	7.9	9.5	1.6	20
Above normal	7.0	9.6	2.6	37
Below normal	6.3	9.3	2.9	46
Dry	5.1	6.7	1.6	31
Critical	2.9	3.5	0.6	20
Notes: NOD = North of Delta; TAF = thousand acre-feet. Values may not sum to totals because of rounding. Source: Data provided by DWR in 2013 based on CALSIM modeling				

be subject to the allocation percentage of deliveries to SOD SWP water contractors receiving the SWP water, not to the BC Table allocation. The annual allocated amount of leased water, made available to a lessee, would be referred to as the Annual Leased Table A Allocated Amount and in most years would be determined by multiplying the Maximum Leased Table A Amount by the lessee’s allocation percentage. For example, if the lessee were a SOD contractor and the year’s final Table A allocation was 50%, then the Maximum Leased Table A Amount would be multiplied by 50%. The amounts shown in column (5), labeled “Maximum Amount Available for Lease,” in Table 2-3 reflect that computation for Table A SOD allocations from 0% to 100% and the additional limitation for Conference Years.

**Table 2-3
Example Maximum BC Table Amount Available for Lease**

(1) Table A SOD Allocation (%)	(2) Existing Conditions (Table A Allocation) (af)	(3) BC Table Allocation (af)	(4) Maximum BC Table Amount Available for In-County Use (af)	(5) Maximum Amount Available for Lease (af)
0	0	3,000	3,000	0
5	1,375	3,000	3,000	0
10	2,750	4,000	3,500	500
15	4,125	5,000	3,500	1,500
20	5,500	6,000	3,500	2,500
25	6,875	15,125	3,500	6,000
30	8,250	16,500	3,500	7,200
35	9,625	17,875	3,500	8,400
40	11,000	19,250	3,500	9,600
45	12,375	20,625	3,500	10,800
50	13,750	22,000	3,500	12,000
55	15,125	23,375	3,500	13,200
60	16,500	27,500	3,500	14,400
65	17,875	27,500	3,500	15,600
70	19,250	27,500	3,500	16,800
75	20,625	27,500	3,500	18,000
80	22,000	27,500	3,500	19,200
85	23,375	27,500	3,500	20,400
90	24,750	27,500	3,500	21,600
95	26,125	27,500	3,500	22,800
100	27,500	27,500	3,500	24,000

Notes: af = acre-feet; BC = Butte County.

Notwithstanding the amounts reflected in Column 5 above, the maximum BC Table Amount Available for lease will be adjusted to zero in and during any year that the DWR Director allocates water pursuant to Article 18(a) of the SWP Contract to meet minimum demands for domestic supply, fire protection, or sanitation. Any use of Butte County’s Table A outside of Butte County by way of transfer, exchange, lease, or storage shall be subject to the allocation of the entity receiving the water, not the BC Table allocation, and all leases of water referenced herein are governed by Sections 1 and 2 of the Agreement in Principle. All water allocated to Butte County using the BC Table allocation shall be used only in Butte County’s service area, and delivery and scheduling of such water shall be in accordance with Articles 10 and 12 of its Water Supply Contract.

Table 2-3 provides an example of the maximum amount of Butte County’s Table A that would be available for lease for a given Butte County in-county use. See Table 3.17-4 for a listing of Butte County Table A contracts and leases. Column 1 lists the range of possible SWP allocations to SOD contractors and assumes the current SWP SOD allocation methodology. Column 2 shows the corresponding Butte County Table A Allocation, assuming a

given SWP allocation percentage in Column 1. Column 3 is the allocation for Butte County as identified in Section 1.a of the Agreement in Principle. Column 4 is an example of Butte County's maximum in-county use; in this case, it is assumed to be 3,500 af, as discussed below. However, when the Table A SOD Allocation is 5% or less under Column 1, this amount would be limited to 3,000 af pursuant to the BC Allocation Table, which is also the value in Column 4. The Maximum Leased Table A Amount to be leased to SOD contractors is 24,000 af. However, the amount that is made available in any single year for lease cannot exceed Column 3 minus the amount that Butte County uses to meet its in-county needs. The assumed 3,500-af in-county use amount consists of a current in-county contracted demand of 2,668 af and 832 af of water that is held in reserve. The Agreement in Principle enables Butte County to lease a portion of its Table A Amount to other SWP contractors. Butte County has entered into agreements for the lease of 14,000 af to the Westside Districts in the San Joaquin Valley that currently receive SWP water and 10,000 af to Palmdale Water District in 2014–2021 with options for multiple 5-year extensions thereafter.

The maximum amount leased may be above or below 24,000 af each year, depending upon the in-county demand and the SOD allocation for that year. Column 5 is an example of the maximum amount that can be leased based on the SOD allocation in Column 1 and the maximum in-county use of either 3,000 af or 3,500 af in Column 4. If Butte County's actual demand is lower than its maximum in-county use (for example, lower than 3,500 af) in any year, the unused amount would be available to add to the Maximum Lease amount in that year. For example, in 2012 and 2013, the actual maximum in-county use is 2,668 af, allowing for a temporary increase of 832 af to the Maximum Leased Table A Amount, or 24,832 af total. Using the allocation shown in Table 2-3 and assuming a 3,500-af in-county contract amount and a 40% SOD allocation, a total of 9,600 af ($24,000 \text{ af} * 40\%$) would be delivered to SOD contractors. However, if the actual in-county use is only 2,668 af, the corresponding Maximum Lease Table A Amount is adjusted to 24,832 af ($24,000 \text{ af} + [3,500 \text{ af} - 2,668 \text{ af}]$). The amount available for delivery to Butte County's SOD lessees would be 9,932.80 af ($24,832 \text{ af} * 40\%$).

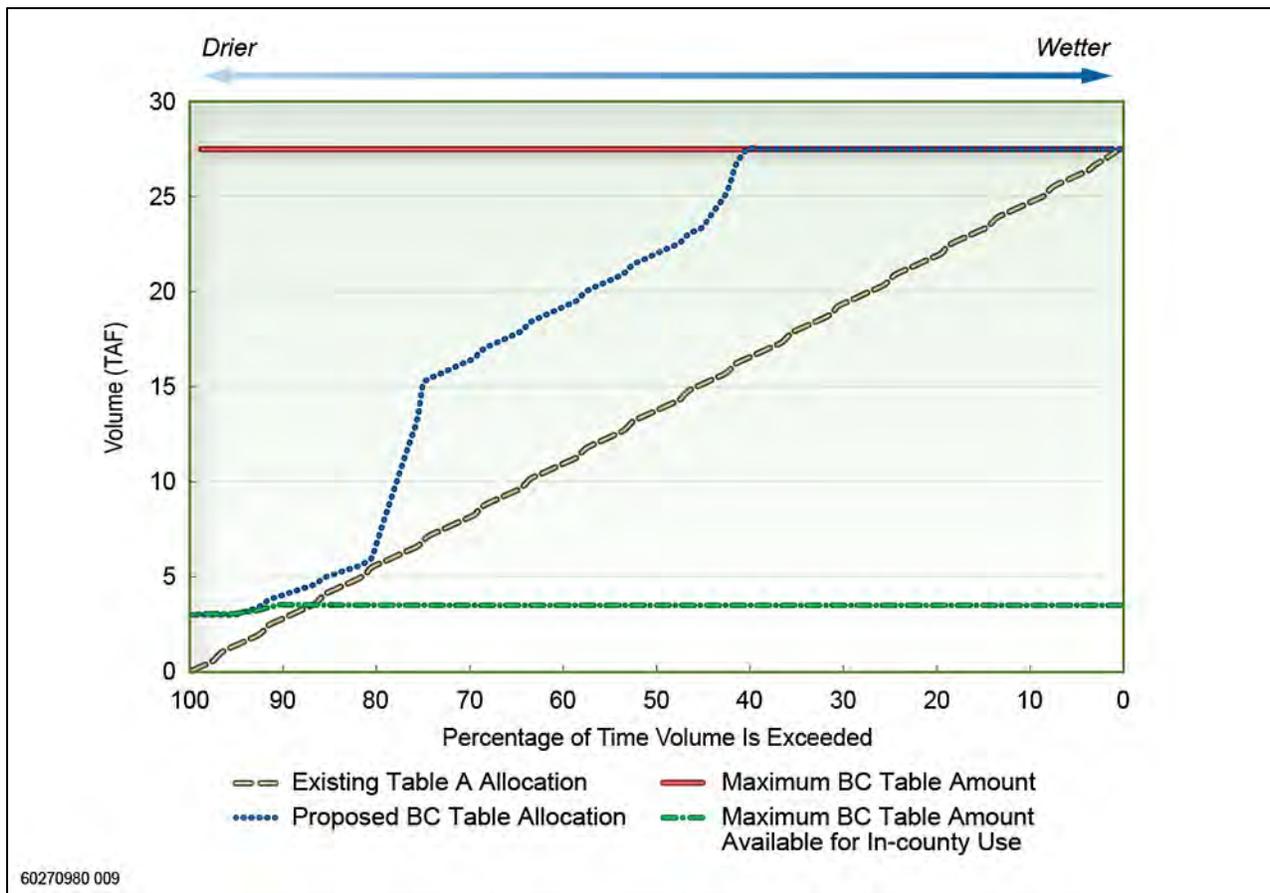
Exhibit 2-8 shows the comparison between the existing Butte County Table A allocation and the proposed BC Table allocation. The values depicted in Exhibit 2-8 correspond to those listed in Table 2-3, which, as explained above, is an example and assumes a maximum in-county use of 3,500 af and lease agreements totaling 24,000 af.

ADVANCED TABLE A PROGRAM

Implementing the Advanced Table A Program would provide SCWA, Napa, and Yuba City with a mechanism to obtain SWP water supplies during dry periods when NOD Allocations and other SWP water supplies are not sufficient to meet local demand. Advanced Table A allocations would be provided for specific use in the service areas of SCWA, Napa, and Yuba City. The Advanced Table A Program does not apply to Butte County.

The volume of SWP water available under the Advanced Table A Program would be accounted for on a cumulative basis from year to year. The cumulative maximum Advanced Table A Program amounts that would become available to SCWA, Napa, and Yuba City are shown in Table 2-4.

Advanced Table A Program water would be repaid to the SWP when the amount of Advanced Table A water taken in a year is not returned within 5 years, and when the proposed NOD Table A allocation exceeds 60%. However, the balance of Advanced Table A Program water taken by the SCWA, Napa, and Yuba City Plaintiff Water Contractors due for repayment back to the SWP would be reset to zero each time Lake Oroville begins flood control operations, exceeds its allowed flood control capacity, or reaches storage capacity of 3.5 million



Source: Results of CALSIM modeling conducted by DWR in 2013, adapted by AECOM in 2013

Exhibit 2-8 Comparison of Annual Butte County Table A and BC Table Water Deliveries

Plaintiff Water Contractor	Maximum Annual Advanced Table A (TAF)	Maximum Annual Allocated Table A and Advanced Table A Amount (TAF)	Cumulative Advanced Table A Balance (TAF)
Solano County Water Agency	15.0	47.7	60.0
Napa County Flood Control and Water Conservation District	7.5	29.0	29.6
Yuba City	5.0	9.6	20.0
Total	27.5	86.3	109.6

Notes: TAF = thousand acre-feet. The actual Maximum Annual Advanced Table A and Cumulative Advanced Table A limits have been rounded to the nearest TAF.
Source: Data provided by DWR in 2013 based on CALSIM modeling

acre-feet, whichever occurs first. In conference years, SCWA would not be able to request Advanced Table A allocations, but its cumulative Advanced Table A limit would be temporarily increased by the lesser of 16,800 af or the remaining Cumulative Advanced Table A Balance for that year. In conference years, the maximum Annual Advanced Table A Amount that could be requested by Napa and Yuba City would be no more than 5,000 af each, not to exceed the cumulative Advanced Table A limitations.

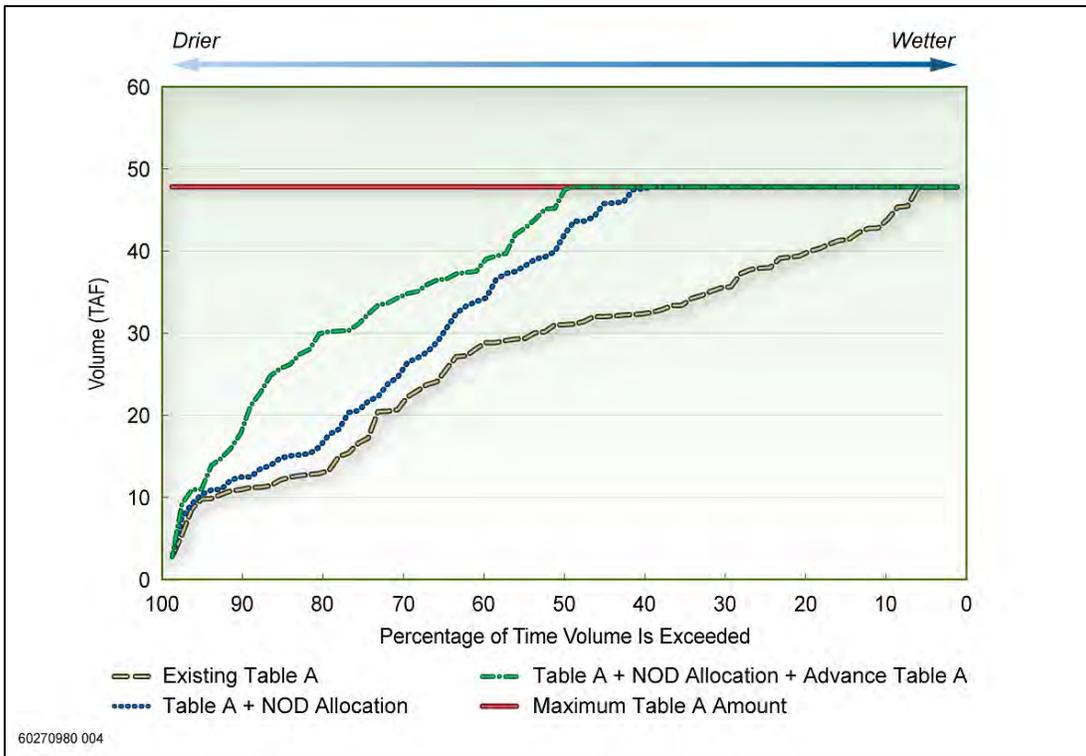
As shown in Table 2-4, the combined annual allocated Table A and Advanced Table A Amount would not exceed the Maximum Table A Amount. The Advanced Table A Program would allow Plaintiff Water Contractors SCWA, Napa, and Yuba City to achieve the Maximum Table A Amount, as long as the Annual Advanced Table A and Cumulative Advanced Table A Balance limitations shown in Table 2-4 are not exceeded. The Advanced Table A Amount would not be made available if Plaintiff Water Contractors SCWA, Napa, and Yuba City were to decide to carry over, exchange, sell to the turn-back pool, or store any portion of their allocated Table A Amounts outside their service areas in that year. With the written permission of the party not using its Advanced Table A allocation, Plaintiff Water Contractors SCWA, Napa, and Yuba City may also request additional Advanced Table A Program water not used by other Plaintiff Water Contractors (SCWA, Napa, and Yuba City), up to a combined annual total of 27.5 TAF, to achieve the Maximum Table A Amount in any given year. There are three limitations to what Plaintiff Water Contractors SCWA, Napa, and Yuba City can take: (1) Plaintiff Water Contractors SCWA, Napa, and Yuba City cannot exceed their annual Advanced Table A limitations; (2) the annual Table A allocation plus Advanced Table A cannot exceed each Plaintiff Water Contractor's (SCWA's, Napa's, and Yuba City's) Maximum Table A amount; and (3) Plaintiff Water Contractors SCWA, Napa, and Yuba City cannot have a balance of un-repaid, borrowed Advanced Table A greater than the Cumulative Advanced Table A Balance limits allows.

Exhibits 2-8 through 2-11 show the change in SWP water deliveries to each of the Plaintiff Water Contractors resulting from implementing the NOD Allocation, BC Table, and Advanced Table A Program. Each exhibit depicts deliveries corresponding to the existing Table A allocation, NOD Allocation or BC Table allocation, and the Advanced Table A Program, as applicable. In addition, the maximum volume of SWP water that could potentially be delivered is shown.

The degree of change is reflected by the increased probability to receive SWP water supplies. For example, as shown in Exhibit 2-10, SCWA would receive about 11 TAF more water about 50% of the time when the NOD Allocation is compared to the existing Table A deliveries (41 TAF - 31 TAF). SCWA would receive an additional 5.0 TAF about 50% of the time when the Advanced Table A Program is compared to the NOD Allocation (47 TAF - 41 TAF). With implementation of the settlement agreement, SCWA would receive a total of 47 TAF about 50% of the time. This amount equals a 16-TAF increase in SWP water supply over the existing Table A allocation (47 TAF - 31 TAF).

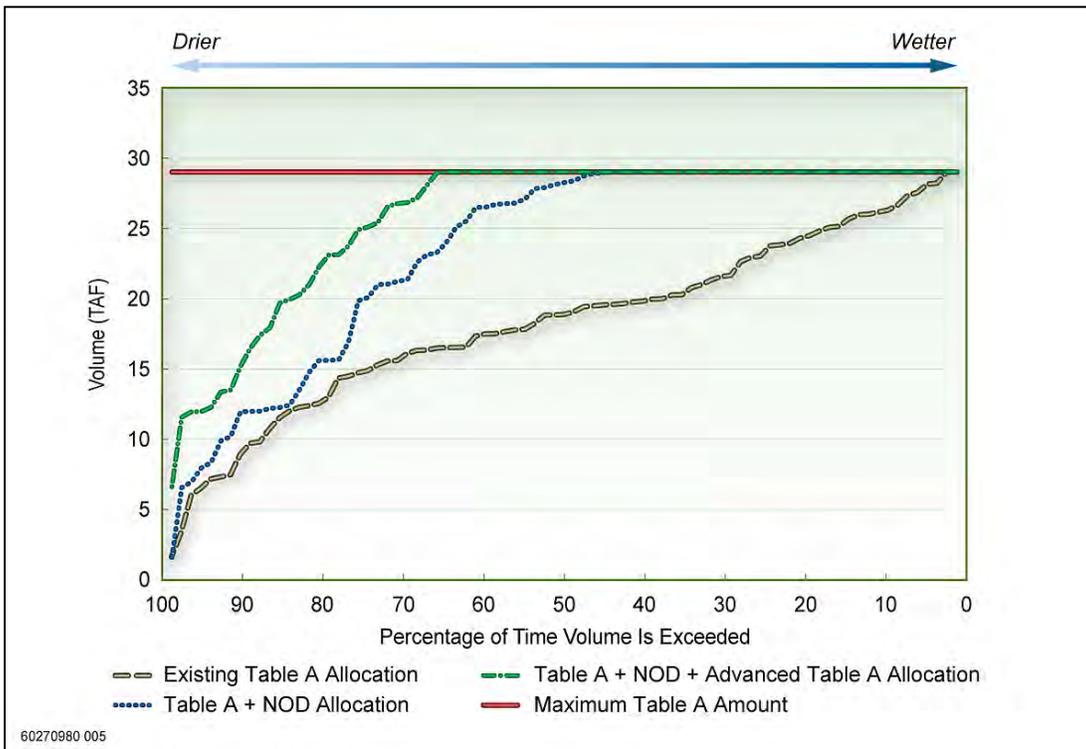
CUMULATIVE CHANGE IN WATER DELIVERIES

Implementing the settlement agreement would increase the allocation to the Plaintiff Water Contractors by an average of 20.8 TAF per year but would not increase their overall Table A Amount. Exhibit 2-12 shows the combined increase in deliveries to the Plaintiff Water Contractors under the Proposed NOD Allocation when compared to the existing Table A allocation.



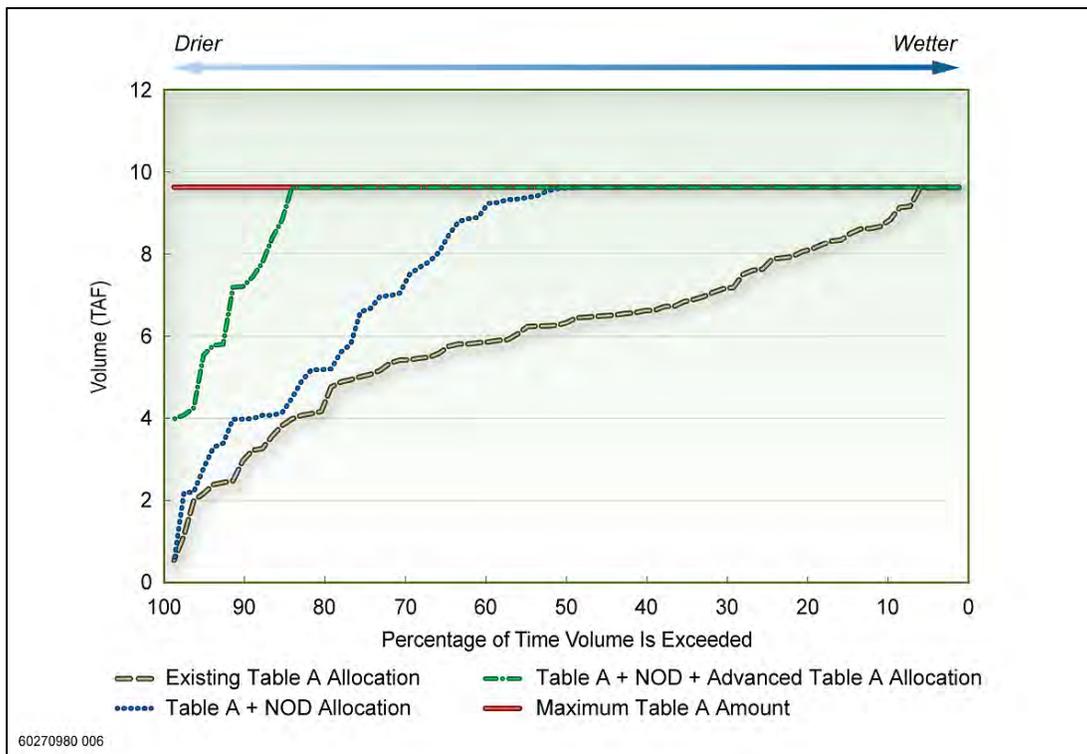
Source: Results of CALSIM modeling conducted by DWR in 2013, adapted by AECOM in 2013

Exhibit 2-9 Change to SWP Allocations for Solano County Water Agency



Source: Results of CALSIM modeling conducted by DWR in 2013, adapted by AECOM in 2013

Exhibit 2-10 Change to SWP Allocations for Napa County Flood Control and Water Conservation District



Source: Results of CALSIM modeling conducted by DWR in 2013, adapted by AECOM in 2013

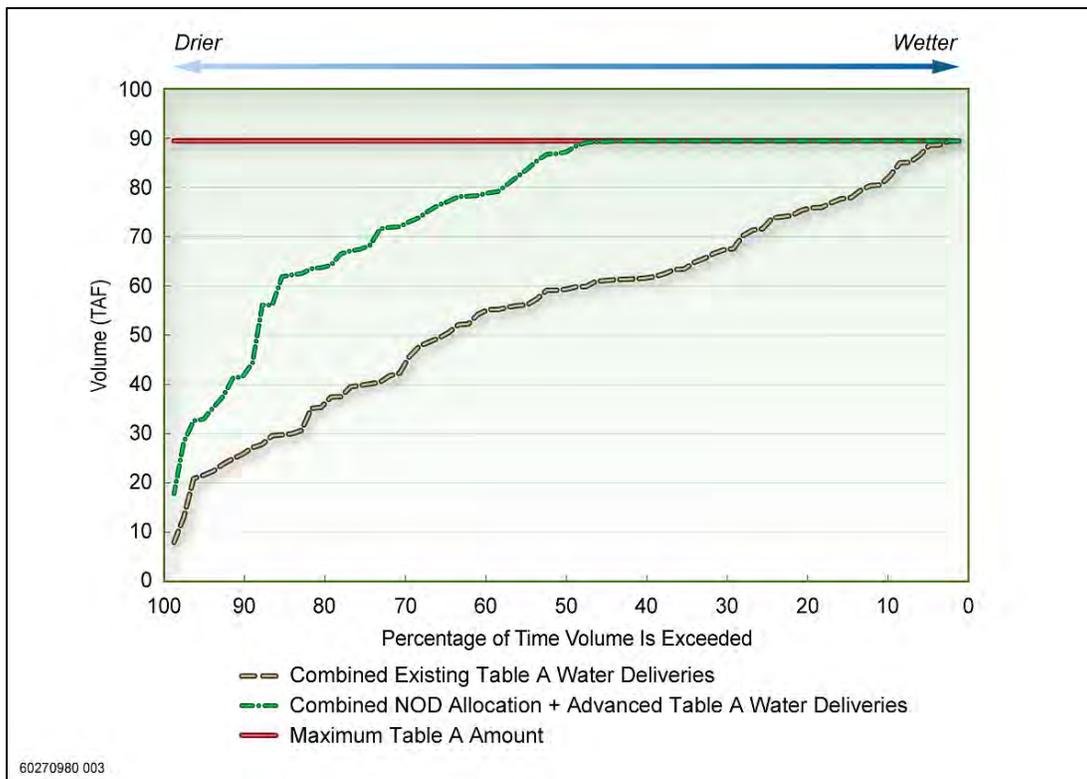
Exhibit 2-11

Change to SWP Allocations for Yuba City

Table 2-5 shows the total volume of SWP water that would be delivered to the Plaintiff Water Contractors associated with the NOD Allocation, BC Table, and Advanced Table A Program. The volume of SWP water shown in Table 2-5 excludes the volume that would be transferred by Butte County and leased to SOD SWP contractors.

Although SOD deliveries to other SWP contractors would not change, the following provisions in the Agreement in Principle may affect the delivery of water to the Plaintiff Water Contractors or SOD water deliveries:

- ▶ The NOD water allocation for each contractor shall not exceed the existing Table A Amount contained in its SWP Contract.
- ▶ For Plaintiff Water Contractors SCWA, Napa, and Yuba City, the increase in allocated Table A attributable to the NOD Allocation would not be transferred to or from, or exchanged with, a SOD contractor. Any transfers or exchanges are subject to the uniform provisions of the SWP contract.
- ▶ Butte County would be allowed to lease the unused portion of its Maximum Table A Amount to other SWP contractors, referred to as Maximum Leased Table A Amount. The annual allocated amount of leased water made available to a lessee would be referred to as the Annual Leased Table A Allocated Amount and would be determined as the Maximum Leased Table A Amount times the lessee's allocation percentage.
- ▶ Water obtained through the NOD water allocation shall not be sold through the turn-back pool.



Source: Results of CALSIM modeling conducted by DWR in 2013, adapted by AECOM in 2013

Exhibit 2-12

Comparison of Cumulative Water Deliveries

Table 2-5 Cumulative Water Deliveries					
Cumulative Total SWP Water Deliveries to Plaintiff Water Contractors ¹					
Water-Year Type	Existing Table A Deliveries (TAF)	Proposed Table A Deliveries		Proposed Table A + ATA Deliveries	
		Proposed Table A + BC Table Deliveries (TAF)	Difference between Proposed Table A + BC Table and Existing Table A Deliveries (TAF)	Proposed Table A + BC table + ATA Deliveries (TAF)	Difference between Proposed Table A + BC Table + ATA Deliveries and Existing Table A Deliveries (TAF)
Average	56.0	69.6	13.6	76.8	20.8
Wet	74.0	88.6	14.6	89.4	15.4
Above normal	65.5	85.4	19.9	85.9	20.4
Below normal	58.7	79.7	21.0	81.2	22.5
Dry	43.1	52.4	9.3	72.4	29.3
Critical	24.8	28.1	3.2	42.8	18.0

Notes: af = acre-feet; ATA = Advanced Table A; BC = Butte County; SWP = State Water Project.
 Values may not sum to totals because of rounding.
¹ Assumes 3,000 af was used as conservative estimate in CALSIM modeling for existing and proposed demand for Butte County in all water years and does not include water leases to out-of-county parties.
 Source: Data provided by DWR in 2013 based on CALSIM modeling and *State Water Project Final Delivery Reliability Report 2011* (DWR 2012a)

Operational or regulatory restrictions that affect water availability only to SOD water contractors would not affect the NOD water allocation.

The following provisions in the Agreements in Principle would affect the Butte County water allocation:

- ▶ If future in-county demands exceed the BC Table for conference years (years when SOD allocations drop to less than 20%), Butte County may request supplies under Article 18(a) to meet minimum demands for domestic supply, fire protection, and sanitation.
- ▶ The Maximum Leased Table A Amount shall not be part of a lessee's contract supplies when classified as conservation storage in accordance with Articles 56(c), 12(e), or 14(b) as contained in the Butte County SWP contract, which may be found at http://www.water.ca.gov/swpao/docs/wsc/CB_O_C.pdf.

Other provisions in the Agreements in Principle consist of conditions or restrictions on the Plaintiff Water Contractors' actions to request or acquire additional water supplies while the terms of the settlement are in effect. These conditions or restrictions would not be considered elements of the Proposed Project that may have a result in a physical change to the environment.

2.5.2 CHANGES TO SWP OPERATIONS AND DOWNSTREAM HYDROLOGY

CHANGES TO RESERVOIR STORAGE

Implementing the proposed water allocations to SCWA, Napa, Yuba City, and Butte County and establishing the Advanced Table A Program would change the delivery schedule of SWP water, thus leading to minor modifications to operations of SWP facilities so that increased water supplies could be delivered to the Plaintiff Water Contractors. The change to the delivery schedule would slightly modify the volume of water stored in Lake Oroville and San Luis Reservoir, as discussed in the following description, but the total amount of SWP water delivered to the Plaintiff Water Contractors under Table A would remain consistent with their original Table A Amounts. Because the model results show implementing the Proposed Project would result in minor changes to water storage in Lake Oroville and San Luis Reservoir, changes in water volume at other CVP or SWP storage facilities located in the Sacramento River watershed are also expected to be minor. Implementing the Proposed Project would not affect DWR's ability to comply with existing regulatory restrictions or deliveries to other SWP water contractors.

Lake Oroville

Water storage volume in Lake Oroville would be reduced a minimal amount with the implementation of the Proposed Project. Table 2-6 shows the only reduction in stored water volume would occur in dry and critical water years.

Changes in stored water volume would result in a minor change in Lake Oroville's water surface elevation when compared to existing conditions. In dry and critical water years, a decrease of stored water volume of about 2.8 TAF could occur in early fall months. A decrease in stored water volume of about 2.8 TAF in dry and critical water years would equal 0.3% of Lake Oroville stored volume.

Table 2-7 presents a summary of the estimated monthly water surface elevation changes for Lake Oroville by water-year type.

**Table 2-6
Changes to Lake Oroville Storage Volume (in TAF)**

Water-Year Type	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Existing Storage Volume¹												
Average	2,171.8	2,376.9	2,578.4	2,851.7	2,987.5	2,881.3	2,415.5	2,121.8	1,862.0	1,770.0	1,824.9	1,958.6
Wet	2,698.4	2,871.3	2,944.9	3,303.7	3,507.8	3,487.6	3,141.1	2,978.6	2,543.2	2,435.8	2,481.7	2,530.6
Above normal	2,342.9	2,644.6	2,945.0	3,305.9	3,494.4	3,384.8	2,829.4	2,462.6	2,066.4	1,950.3	2,010.1	2,125.5
Below normal	2,053.2	2,303.5	2,570.7	2,949.7	3,172.9	3,072.6	2,487.4	2,082.1	1,918.4	1,844.6	1,912.8	2,124.7
Dry	1,839.8	2,064.1	2,372.0	2,567.5	2,613.9	2,421.0	1,875.3	1,439.1	1,306.4	1,195.0	1,274.2	1,514.5
Critical	1,510.4	1,608.5	1,767.0	1,767.9	1,739.8	1,573.5	1,189.6	1,023.2	965.9	937.5	955.5	1,038.5
Proposed Project Storage Volume (Table A + ATA)¹												
Average	2,171.8	2,375.9	2,578.4	2,851.7	2,987.5	2,881.3	2,415.5	2,121.8	1,861.8	1,769.3	1,824.3	1,958.6
Wet	2,698.4	2,871.3	2,944.9	3,303.7	3,507.8	3,447.6	3,141.1	2,978.6	2,543.2	2,435.8	2,481.7	2,530.6
Above normal	2,342.9	2,644.6	2,945.0	3,305.9	3,494.4	3,384.8	2,829.4	2,462.6	2,066.4	1,950.3	2,010.1	2,125.5
Below normal	2,053.2	2,303.5	2,570.5	2,949.7	3,172.9	3,072.6	2,487.8	2,082.1	1,918.4	1,844.5	1,912.8	2,124.7
Dry	1,839.8	2,064.1	2,372.0	2,567.5	2,613.9	2,421.0	1,875.3	1,439.1	1,306.4	1,193.9	1,272.1	1,514.5
Critical	1,510.4	1,608.5	1,767.0	1,767.9	1,739.8	1,573.5	1,189.6	1,023.2	965.0	934.7	954.9	1,038.5
Change in Storage Volume²												
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.6	-0.5	0.0
Wet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above normal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below normal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1.0	-2.1	0.0
Critical	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.9	-2.7	-0.5	0.0
Notes: ATA = Advanced Table A; TAF = thousand acre-feet.												
¹ Assumes 3,000 acre-feet was used as a conservative estimate in the CALSIM modeling for existing and proposed demand for Butte County in all water years and does not include water leases to out-of-county parties.												
² Change in water storage volume may not be mathematically correct because of rounding.												
Source: Data provided by DWR in 2013 based on CALSIM modeling and <i>State Water Project Final Delivery Reliability Report 2011</i> (DWR 2012a)												

The modeling results indicate that changes in water surface elevations would typically be less than 0.5 foot.

Decreases in water surface elevation would be most pronounced during dry and critical water years and from September through December. During these periods, the water surface elevation in Lake Oroville is presently drawn down 11–50 feet per month. A 0.5-foot change in reservoir elevation is equivalent to a change that would occur over a 1.5- to 1-day period of existing operations. Therefore, the Proposed Project would cause Lake Oroville to reach a given water surface elevation about 1 day sooner when compared to existing operations.

Table 2-7 Estimated Changes to Lake Oroville Water Surface Elevation												
Water-Year Type	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
(feet above mean sea level)												
Existing Water Surface Elevation¹												
Average	791.5	810.6	828.5	848.9	858.2	849.4	811.0	783.1	759.9	750.4	756.0	769.8
Wet	840.6	854.6	859.9	884.8	898.1	896.7	873.1	860.9	827.0	818.1	822.6	826.8
Above normal	810.4	836.6	860.0	884.9	897.2	890.0	851.2	822.1	787.1	775.7	780.4	790.8
Below normal	779.9	805.2	828.5	859.4	875.5	868.7	824.5	789.3	773.7	766.4	772.7	791.3
Dry	761.9	784.9	813.4	829.6	834.0	818.5	768.6	721.1	704.6	690.1	699.0	725.4
Critical	725.5	736.6	754.6	754.9	752.1	733.2	687.4	664.8	656.2	652.3	655.6	668.8
Proposed Project Water Surface Elevation (Table A + ATA)¹												
Average	791.5	810.6	828.5	848.9	858.2	849.4	811.0	783.1	759.9	750.3	755.9	769.8
Wet	840.6	854.6	859.9	884.8	898.1	896.7	873.1	860.9	827.0	818.1	822.6	826.8
Above normal	810.4	836.6	860.0	884.9	897.2	890.0	851.2	822.1	787.1	775.7	780.4	790.8
Below normal	779.9	805.2	828.5	859.4	875.5	868.7	824.5	789.3	773.7	766.4	772.7	791.3
Dry	761.9	784.9	813.4	829.6	834.0	818.5	768.6	721.1	704.6	689.9	698.7	725.4
Critical	725.5	736.6	754.6	754.9	752.1	733.2	687.4	664.8	656.0	651.9	655.5	668.8
Change in Water Surface Elevation²												
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
Wet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above normal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below normal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.3	0.0
Critical	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	-0.4	0.0	0.0
Note: ATA = Advanced Table A.												
¹ Assumes that Butte County existing and proposed demand of 3,000 acre-feet was used as a conservative estimate in CALSIM modeling for all water years and does not include water leases to out-of-county parties.												
² Change in water surface elevation may not be mathematically correct because of rounding.												
Source: Data provided by DWR in 2013 based on CALSIM modeling and <i>State Water Project Final Delivery Reliability Report 2011</i> (DWR 2012a)												

San Luis Reservoir

Table 2-8 shows that no change in San Luis Reservoir storage volume would occur over the various water-year types with implementation of the proposed project. An increase in stored water volume of about 0.1 TAF would occur in critical water years.

**Table 2-8
Estimated Changes to San Luis Reservoir Storage Volume (in TAF)**

Water-Year Type	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Existing Storage Volume¹												
Average	1,260.4	1,408.7	1,534.3	1,357.9	1,066.4	749.1	664.4	587.1	605.4	662.3	774.1	1,086.8
Wet	1,319.5	1,525.8	1,746.3	1,542.4	1,246.1	997.4	853.6	761.9	778.2	789.7	768.8	1,082.3
Above normal	1,223.1	1,394.0	1,603.9	1,391.5	1,041.6	761.7	633.9	557.2	611.8	653.5	707.6	1,022.5
Below normal	1,252.7	1,367.6	1,492.2	1,294.2	964.9	581.6	550.6	489.9	555.9	681.7	950.8	1,267.7
Dry	1,280.6	1,383.5	1,401.5	1,232.7	945.2	546.3	532.3	530.0	532.4	623.8	848.1	1,145.1
Critical	1,145.4	1,254.1	1,260.1	1,189.2	1,000.6	699.0	613.2	434.8	393.7	429.3	529.5	856.8
Proposed Project Storage Volume (Table A + ATA)¹												
Average	1,260.4	1,408.7	1,534.3	1,357.9	1,066.4	749.1	664.4	587.1	605.4	662.3	774.1	1,086.8
Wet	1,319.5	1,525.8	1,746.3	1,542.4	1,246.1	997.4	853.6	761.9	778.2	789.7	768.9	1,082.3
Above normal	1,223.1	1,394.0	1,602.9	1,391.5	1,041.6	761.7	633.9	557.2	611.8	653.5	707.6	1,022.5
Below normal	1,252.7	1,367.6	1,492.2	1,294.2	964.9	581.6	550.6	489.9	554.9	681.7	950.8	1,267.7
Dry	1,280.6	1,383.5	1,401.5	1,232.7	945.2	546.3	532.3	530.0	532.4	623.8	848.1	1,145.1
Critical	1,145.4	1,254.1	1,260.1	1,189.2	1,000.6	699.0	613.2	434.8	393.7	429.3	529.5	856.8
Change in Storage Volume²												
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above normal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below normal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Critical	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes: ATA = Advanced Table A; TAF = thousand acre-feet.

¹ Assumes that 3,000 af was used as a conservative estimate in CALSIM modeling for existing and proposed demand for Butte County in all water years and does not include water leases to out-of-county parties.

² Change in water storage volume may not be mathematically correct because of rounding.

Source: Data provided by DWR in 2013 based on CALSIM modeling and *State Water Project Final Delivery Reliability Report 2011* (DWR 2012a)

There would also be no change in San Luis Reservoir water surface elevation.

The lease of Table A water from Butte County to other out-of-county parties as part of the lease agreements described in this document might affect the volume of stored water volume in San Luis Reservoir, depending on when the transfer is made and on the need by any SOD water contractor to store supplies for a short-term period. The specific effect of storing the transferred supplies on San Luis Reservoir's storage volume and surface elevation would be subject to case-by-case conditions.

Table 2-9 presents a summary of the estimated monthly water surface elevation changes for San Luis Reservoir by water-year type. As shown, no change to water surface elevation would occur.

CHANGES TO DOWNSTREAM HYDROLOGY

With implementation of the proposed NOD water allocation to SCWA, Napa, and Yuba City and the Advanced Table A Program, and the Butte County BC Table allocations, operations of SWP facilities would be minimally modified to deliver increased SWP water supplies to the Plaintiff Water Contractors. The change in delivery schedule would slightly modify the flow in surface waterways downstream of Oroville Dam, as discussed in the following description.

Feather River

Implementing the Proposed Project would result in minor reductions in Feather River flow downstream of Lake Oroville. As shown in Table 2-10, changes in river flow would range from -8 to +11 cubic feet per second (cfs). These changes would constitute a change in river flow of less than 0.4%.

Sacramento River

Implementing the Proposed Project would result in minor reductions in Sacramento River flow as measured at Freeport. Changes in river flow would range from -5 to +14 cfs (Table 2-11). These changes would constitute a change in river flow of less than 0.13%.

Old and Middle Rivers

Implementing the Proposed Project would result in a minor increase in Old and Middle River flow. Changes in river flow would range from a reduction of less than 4 cfs to an increase of about 18 cfs (Table 2-12). These changes would constitute a change in river flow of less than 0.34%.

Delta Outflow

Implementing the Proposed Project would result in a minor decrease in Delta outflow. Changes in Delta outflow would be reduced by about 12 cfs (Table 2-13). These changes would constitute, on average, a change in outflow volume of less than 0.17%.

CHANGES TO DELTA WATER QUALITY (X2)

Changes in Delta inflow, Delta outflow, and the volume of water exported to SOD contractors resulting from implementing the proposed NOD water allocation, BC Table, and Advanced Table A Program would theoretically result in a minor relocation of the X2 isohaline. X2 is measured by distance from the Golden Gate to the 2-parts-per-thousand isohaline location. The proposed NOD water allocation, BC Table, and Advanced Table A Program would not affect the ability of the SWP and CVP to meet the X2 criterion because their operations are adjusted to ensure compliance.

As shown in Table 2-14, the CALSIM modeling results report that implementation of the Proposed Project would cause the position of the X2 isohaline to be relocated either upstream or downstream from its present location by 0.1 kilometer (km) (328 feet). Upstream movement is reflected in Table 2-14 as negative values while

**Table 2-9
Estimated Changes to San Luis Reservoir Water Surface Elevation**

Water-Year Type	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
(feet above mean sea level)												
Existing Water Surface Elevation¹												
Average	476.7	490.2	501.2	485.6	457.7	422.7	413.7	405.3	407.6	414.5	427.1	460.0
Wet	482.0	500.5	519.6	502.1	474.6	448.8	434.2	425.2	427.9	428.8	425.9	459.5
Above normal	473.0	488.6	507.3	488.8	455.6	425.3	410.7	401.8	409.1	414.7	420.6	454.4
Below normal	476.2	486.4	497.5	479.9	447.9	404.3	400.9	393.8	401.7	417.1	446.5	477.2
Dry	479.0	488.4	490.0	474.5	446.2	400.1	399.4	399.7	399.5	410.8	436.3	466.2
Critical	466.1	476.3	476.9	470.2	451.8	419.0	408.5	387.1	381.5	385.9	399.4	436.9
Proposed Project Water Surface Elevation (Table A + ATA)¹												
Average	476.7	490.2	501.2	485.6	457.7	422.7	413.7	405.3	407.6	414.5	427.1	460.0
Wet	482.0	500.5	519.6	502.1	474.6	448.8	434.2	425.2	427.9	428.8	425.9	459.5
Above normal	473.0	488.6	507.3	488.8	455.6	425.3	410.7	401.8	409.1	414.7	420.6	454.4
Below normal	476.2	486.4	497.5	479.9	447.9	404.3	400.9	393.8	401.7	417.1	446.5	477.2
Dry	479.0	488.4	490.0	474.5	446.2	400.1	399.4	399.7	399.5	410.8	436.3	466.2
Critical	466.1	476.3	476.9	470.2	451.8	419.0	408.5	387.1	381.5	385.9	399.4	436.9
Change in Water Surface Elevation²												
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above normal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Below normal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Critical	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: ATA = Advanced Table A.
¹ Assumes that Butte County existing and proposed demand of 3,000 acre-feet was used as a conservative estimate in CALSIM modeling for all water years and does not include water leases to out-of-county parties.
² Change in water surface elevation may not be mathematically correct because of rounding
Source: Data provided by DWR in 2013 based on CALSIM modeling and *State Water Project Final Delivery Reliability Report 2011* (DWR 2012a)

downstream movement is reflected as positive values. In practice, however, operation of the SWP would continue to meet the X2 criterion.

CHANGES TO SOD WATER DELIVERIES

Implementing the proposed NOD Allocation, BC Table, and Advanced Table A Program would require changes in operations of SWP facilities to deliver increased water supplies to the Plaintiff Water Contractors. Water that otherwise would have flowed to San Francisco Bay as Delta outflow, would have been exported to SOD contractors

**Table 2-10
Estimated Change to Feather River Flow**

Water-Year Type	Existing Flow (cfs)	Proposed Project Flow (cfs)	Difference between Proposed Project Flow and Existing Flow (cfs)	Percent Change
Average	4,416	4,416	0	0.00
Wet	7,087	7,084	-3	-0.04
Above normal	4,874	4,873	-1	-0.02
Below normal	3,122	3,124	2	0.06
Dry	2,891	2,902	11	0.37
Critical	2,006	1,998	-8	-0.40

Notes: cfs = cubic feet per second. Values may not sum to totals because of rounding.

Source: Data provided by DWR in 2013 based on CALSIM modeling and *State Water Project Final Delivery Reliability Report 2011* (DWR 2012a)

**Table 2-11
Estimated Change to Sacramento River Flow**

Water-Year Type	Existing Flow (cfs)	Proposed Project Flow (cfs)	Difference between Proposed Project Flow and Existing Flow (cfs)	Percent Change
Average	21,770	21,772	2	0.01
Wet	31,026	31,023	-3	-0.01
Above normal	25,417	25,412	-5	-0.02
Below normal	19,024	19,023	-1	0.00
Dry	15,596	15,603	7	0.04
Critical	10,838	10,853	14	0.13

Notes: cfs = cubic feet per second.

Values may not sum to totals because of rounding.

Source: Data provided by DWR in 2013 based on CALSIM modeling and *State Water Project Final Delivery Reliability Report 2011* (DWR 2012a)

as part of SWP Table A supplies, or would have been delivered to either the Plaintiff Water Contractors or SOD water contractors as Article 21 water supplies would now be delivered to the Plaintiff Water Contractors. For actual operations and in practice, however, the amounts of water allocated under the NOD Allocation and Advanced Table A Program are small in comparison to the total water in the SWP; thus, the SWP would be operated so that SOD deliveries to other SWP contractors would not change.

Table 2-15 shows the estimated change in deliveries to SOD water contractors. As shown, it is estimated that reductions of about 1.26% could occur in dry water years. Although changes in deliveries have been estimated, these small volumes would not be expected to result in actual reductions or increases in deliveries. These changes do not reflect the long-term lease water deliveries to parties located SOD enabled by the Butte County settlement agreement.

**Table 2-12
Estimated Change to Old and Middle River Flow**

Water-Year Type	Existing Flow (cfs)	Proposed Project Flow (cfs)	Difference between Proposed Project Flow and Existing Flow (cfs)	Percent Change
Average	-4,738	-4,725	13	0.27
Wet	-4,260	-4,246	14	0.33
Above normal	-5,202	-5,184	18	0.34
Below normal	-5,558	-5,543	15	0.26
Dry	-5,251	-5,233	18	0.34
Critical	-3,627	-3,630	-4	-0.10

Notes: cfs = cubic feet per second.

Values may not sum to totals because of rounding.

Source: Data provided by DWR in 2013 based on CALSIM modeling and *State Water Project Final Delivery Reliability Report 2011* (DWR 2012a)

**Table 2-13
Estimated Change to Delta Outflow**

Water-Year Type	Existing Delta Outflow (cfs)	Proposed Project Delta Outflow (cfs)	Difference between Proposed Project Delta Outflow and Existing Delta Outflow (cfs)	Percent Change
Average	21,969	21,964	-4	-0.02
Wet	38,845	38,840	-5	-0.01
Above normal	25,072	25,067	-5	-0.02
Below normal	15,250	15,250	0	0.00
Dry	11,054	11,053	-1	-0.01
Critical	6,768	6,757	-12	-0.17

Notes: cfs = cubic feet per second.

Values may not sum to totals because of rounding.

Source: Data provided by DWR in 2013 based on CALSIM modeling and *State Water Project Final Delivery Reliability Report 2011* (DWR 2012a)

**Table 2-14
Estimated Change to Location of X2 Isohaline**

Water-Year Type	Spring X2				Fall X2			
	Feb	Mar	Apr	May	Jun	Sep	Oct	Nov
	Mean Monthly Distance (km)							
Existing X2 Location								
Average	61.1	61.0	63.6	67.7	74.6	83.6	84.3	82.4
Wet	50.4	52.2	54.5	57.6	65.1	73.5	73.6	73.2
Above normal	54.0	52.8	58.4	63.3	72.9	81.0	80.9	78.9
Below normal	61.1	63.4	64.6	68.5	76.4	89.2	89.3	85.3
Dry	70.1	67.1	70.0	74.5	80.5	89.9	91.6	89.0
Critical	77.6	75.4	77.5	82.7	86.0	91.9	93.5	92.6
Proposed Project X2 Location (Table A + ATA) ¹								
Average	61.2	61.0	63.6	67.8	74.6	83.6	84.2	82.4
Wet	50.4	52.2	54.5	57.6	65.0	73.4	73.6	73.2
Above normal	54.0	52.7	58.5	63.3	72.8	81.0	80.9	78.9
Below normal	61.1	63.4	64.6	68.5	76.4	89.2	89.3	85.3
Dry	70.1	67.2	70.0	74.6	80.5	89.9	91.5	89.0
Critical	77.6	75.4	77.5	82.7	86.1	91.8	93.5	92.7
Change in X2 Location ²								
Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Wet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Above normal	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0
Below normal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dry	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1	0.0
Critical	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Notes: ATA = Advanced Table A; km = kilometers.								
¹ Assumes Butte County existing and proposed demand of 3,000 af was used as conservative estimate in CalSim modeling for all water years and does not include water leases to out-of-county parties.								
² Changes in X2 location values may vary because of rounding existing and proposed X2 location values.								
Source: Data provided by DWR in 2013 based on CALSIM modeling and <i>State Water Project Final Delivery Reliability Report 2011</i> (DWR 2012a)								

**Table 2-15
Estimated Change in SOD Water Deliveries**

Water-Year Type	Existing SOD Water Deliveries (TAF)	Proposed SOD Water Deliveries ¹ (TAF)	Difference between Proposed and Existing SOD Water Deliveries (TAF)	Percent Change
Average	2,578	2,564	-14	-0.53
Wet	3,228	3,219	-9	-0.29
Above normal	2,753	2,742	-11	-0.40
Below normal	2,711	2,703	-8	-0.28
Dry	2,235	2,207	-28	-1.26
Critical	1,369	1,359	-10	-0.76

Notes: SOD = south of Delta; TAF = thousand acre-feet.

¹ Assumes 3,000 af as existing and proposed demand for Butte County in all water years and does not include water leases to out-of-county parties.

Source: Data provided by DWR in 2013 based on CALSIM modeling and *State Water Project Final Delivery Reliability Report 2011* (DWR 2012a)

3 INITIAL STUDY CHECKLIST

PROJECT INFORMATION	
1. Project Title:	State Water Project Supply Allocation Settlement Agreement
2. Lead Agency Name and Address:	California Department of Water Resources State Water Project Analysis Office 1416 Ninth Street, Room 1620 Sacramento, CA 95814
3. Contact Person and Phone Number:	Ted Alvarez, Supervising Engineer (916) 653-6271
4. Project Location:	State Water Project service area
5. Project Sponsor's Name and Address:	California Department of Water Resources State Water Project Analysis Office 1416 Ninth Street, Room 1620 Sacramento CA 95814
6. General Plan Designation:	Not Applicable
7. Zoning:	Not Applicable
8. Description of Project:	<p>The California Department of Water Resources (DWR) is proposing to approve four settlement agreements and amendments related to the agreements to State Water Project (SWP) long-term water supply contracts (SWP Contracts) with four SWP water contractors: Solano County Water Agency, the Napa County Flood Control and Water Conservation District, City of Yuba City, and the County of Butte.</p> <p>The Proposed Project consists of approving four separate settlement agreements and SWP Contract amendments between DWR and each of the Plaintiff Water Contractors and approving the settlement agreements by The Parties to the litigation. Implementing the provisions of the settlement agreements would result in modifying SWP allocations to improve water delivery reliability and modify the volume of water that may be delivered to each of the Plaintiff Water Contractors. The Proposed Project would not change the imposed export limitations and would not induce growth not already planned within current local land use plans. Water provided through implementation of the settlement agreements could remove an obstacle to future growth contemplated within current local land use plans. DWR would continue to meet all existing requirements, including water quality and biological opinions for designated species.</p>
9. Surrounding Land Uses and Setting:	See Section 3.10, "Land Use and Planning."
10. Other public agencies whose approval is required:	<ul style="list-style-type: none"> • Solano County Water Agency • Napa County Flood Control and Water Conservation District • City of Yuba City • County of Butte • Metropolitan Water District of Southern California, • Alameda County Flood Control & Water Conservation District, Zone 7 • Alameda County Water District • Antelope Valley–East Kern Water Agency • Castaic Lake Water Agency • Central Coast Water Authority • Coachella Valley Water District • Kern County Water Agency • Mojave Water Agency • Palmdale Water District • San Geronio Pass Water Agency • Santa Clara Valley Water District • Tulare Lake Basin Water Storage District

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture & Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology & Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology & Water Quality |
| <input type="checkbox"/> Land Use & Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population & Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities & Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- I find that although the proposed project **COULD** have a significant effect on the environment, there **WILL NOT** be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- I find that the proposed project **MAY** have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Signature

7/16/13

Date

Robert B. Cooke

Printed Name

Chief, State Water Project Analysis Office

Title

California Department of Water Resources

Agency

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

3.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.1.1 ENVIRONMENTAL SETTING

Visual resources with aesthetic value found in the service areas of the four Plaintiff Water Contractors and at other SWP facilities include scenic landscapes at numerous SWP recreation sites, such as sites along the Feather and Sacramento Rivers and sites in the Lake Oroville and San Luis Reservoir State Recreation Areas (SRAs); agricultural and rural landscapes; rolling foothill landscapes; forestlands; and views of the Sierra Nevada, Coast Ranges, and Pacific Ocean. Urban and suburban landscapes are also prominent in the water service areas of Yuba City, Napa, and SCWA.

The scenic vistas at Lake Oroville and San Luis Reservoir are partially influenced by the fluctuating surface water elevations of these water bodies. As water is drawn down from the reservoirs, bare mineral soils are exposed, which creates a “bathtub ring” effect around the perimeter. This exposed soil creates a visual contrast with surrounding water surface, vegetation, rocks, and terrain. This contrast could expose light-colored mineral soils that could be a potential source of glare.

As described in Chapter 2, “Project Description,” the results of CALSIM modeling indicate that the water elevation at Lake Oroville can fluctuate more than 246 feet, ranging from 898 feet mean sea level (msl) when full to 652 feet msl when drawn down (Table 2-7). At San Luis Reservoir, the water elevation can fluctuate from about 519 feet msl when full to about 381 feet msl when drawn down (Table 2-9).

The Feather River Scenic Byway extends along State Route (SR) 70, following the north and middle forks of the Feather River, from west of Lake Oroville in the Plumas National Forest through Quincy to the Hallelujah Junction and U.S. Highway (U.S.) 395 (DOT 2012). The portion of SR 152 designated as a scenic highway passes through agricultural lands and the San Luis Reservoir SRA (Caltrans 2012). Sections of several other highways located in the project area are eligible for state scenic highway designation, including SR 37 in Solano County, SR 29 in Napa County, and portions of SR 14 in Kern and Kings Counties; however, none have officially been designated (Caltrans 2012).

The visual quality of agricultural landscapes in the project area is partially characterized by crop patterns and crop types.

3.1.2 DISCUSSION

a) Have a substantial adverse effect on a scenic vista?

Implementing the Proposed Project would result in increases in the volume of water delivered to the Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. No new construction or physical alteration of existing SWP facilities would occur. As presented in Chapter 2, “Project Description,” implementing the Proposed Project would cause monthly water surface elevation fluctuations of up to 0.4 foot compared with existing conditions in Lake Oroville during certain months of critical water years; however, the average monthly water surface elevation change would be less than +/- 0.1 foot.

In addition, the overall variation of water elevation at Lake Oroville would be within the fluctuations of existing operation (653–898 feet msl). Although there would be potential increases in the extent of exposed soil on slopes resulting from increased reservoir drawdown, this minor increase could contribute to degradation of the visual quality of the scenic vista of the area.

Proposed Project operations would not involve drawing down the reservoir water surface elevation below the minimum water elevation of existing operations. Therefore, the impacts on scenic vistas at Lake Oroville SRA and along the Feather River Scenic Byway would be minor compared with the changes in the scenic vista that occur with existing seasonal fluctuations in water surface elevation. This impact would be **less than significant**.

At San Luis Reservoir, implementing the Proposed Project would not change water elevation when compared to existing operations. In dry water years, a decline in water surface elevation of up to 0.1 foot could occur. Although there would be potential small increases in the extent of exposed side slopes during periods with increased drawdown that could contribute to degradation of the visual quality of the scenic vista of San Luis Reservoir and associated scenic highways, the changes would occur infrequently and would be minor compared with the visual changes that occur with existing seasonal fluctuations in water surface elevation.

As described in Section 3.2, “Agriculture and Forestry Resources,” implementing the Proposed Project would result in changes to SOD water deliveries for agricultural uses in Kings, Kern, and Stanislaus Counties. Implementing the project could result in an estimated potential temporary reduction of water supplies capable of supporting 1,963 irrigated acres of agriculture during dry water years, resulting in increased fallow or dry-farmed land or changes in crop patterns or crop types. These changes would not alter the agricultural landscapes in these service areas. Such visual changes, however, would remain consistent with the existing agricultural land practices and would not substantially alter an existing scenic resource on a permanent basis.

During dry and critically dry years, when existing water supply is typically more constrained and a high potential for temporary fallowing of agricultural land exists, implementing the Proposed Project would result in an increase in water supply and could increase the potential number of acres that could be irrigated.

Because no agricultural land would be affected by implementing the Proposed Project and the reduction of agricultural water deliveries to SOD irrigated acres would occur on a temporary basis during above-normal or

below-normal water years, impacts on visual resources would be minor and consistent with existing agricultural practices. Therefore, this impact would be **less than significant**.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Implementing the Proposed Project would result in increases in the volume of water delivered to the NOD contractors and associated minor changes to existing SWP facility operations. No new construction or physical alteration of existing SWP facilities would occur. Therefore, implementing the Proposed Project would not result in any damage to scenic resources, including trees, rock outcroppings, or historic buildings in a state scenic highway. **No impact** would occur.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

As stated previously, decreases in surface water elevations below the existing operating range of Lake Oroville and San Luis Reservoir would result in small potential increases in the extent of exposed soil on slopes during periods of drawdown that could contribute to degradation of the visual quality of the scenic vista. However, this change would be minor compared with the changes to the visual character of these areas that occur with existing seasonal fluctuations in water surface elevation.

Implementing the Proposed Project could result in changes in the irrigation of agriculture in the service areas of SOD agricultural water contractors, which could potentially affect the visual quality of scenic agricultural landscapes. Because no agricultural land would be converted with implementation of the Proposed Project and the reduction of irrigated acres would occur only during above-normal or below-normal water years, any impacts on visual resources would be minor. Therefore, this impact would be **less than significant**.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Implementing the Proposed Project would not result in new construction or physical alteration of existing SWP facilities that would introduce a new source of light that would adversely affect day or nighttime views. **No impact** would occur.

3.2 AGRICULTURE AND FORESTRY RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture and Forestry Resources.				
<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.</p>				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.2.1 ENVIRONMENTAL SETTING

The SWP provides water for approximately two-thirds of the state's residents, and project water is used to irrigate about 750,000 acres of agricultural land (DWR 2012a). SWP contractors include cities, counties, urban water agencies, and agricultural irrigation districts. Most contractors use the project water they receive for municipal purposes, including the four Plaintiff Water Contractors. Six SWP contractors use SWP for agricultural purposes.

Table 3.2-1 presents a summary of SWP allocations for agricultural use by contractor. Approximately 72% of the total SWP water supply is allocated for urban use, and the remaining 28% is allocated for agricultural purposes (Table 3.2-1). All of the SWP’s agricultural contractors are located in Kern and Kings Counties except for Oak Flat Water District, which is located in Stanislaus County.

Table 3.2-1 State Water Project Agricultural Water Use Allocations by Water Contractor			
SWP Contractor	County	Table A Amounts ¹ (TAF per year)	Percent Allocation of Total Maximum SOD Table A Amount ^{2,3}
Dudley Ridge Water District	Kings	57.3	1.41%
Empire West Side Irrigation District	Kings	3.0	0.07%
Kern County Water Agency	Kern	998.7	24.62%
County of Kings	Kings	9.3	0.23%
Oak Flat Water District	Stanislaus	5.7	0.14%
Tulare Lake Basin Water Storage District	Kings	95.9	2.36%
Total		1,170.0	28.83%

Notes: SOD = south of Delta; SWP = State Water Project.
¹ Maximum Table A Amount is 4,172,786 acre-feet per year.
² Maximum south of Delta Table A allocation is 4,056,205 acre-feet per year.
³ Assumes an equal reduction of water deliveries for all SOD water contractors. Long-term water leases are not included in estimates.
Source: DWR 2012b

Kern, Kings, and Stanislaus Counties are predominantly agriculture-based counties. The SWP water supplies are among the multiple water supplies necessary for the irrigation of agricultural production lands. In 2011, most agricultural acreage in Kern County was used to grow field crops (409,005 acres) and fruit and nut crops (385,319 acres) (Table 3.2-2). In addition, milk is among the top agriculture commodities in the county (Kern County 2012).

Table 3.2-2 Agricultural Acreage in Kern, Kings, and Stanislaus Counties, 2011					
County	Field Crops	Fruit and Nut Crops	Vegetable Crops	Seed Crops	Nursery Crops
Kern	409,005	385,319	75,130	2,984	2,121
Kings	717,364	63,793	41,790	1,732	0
Stanislaus	763,316	211,638	51,949	889	1,727

Sources: Kern County 2012, Kings County 2012, Stanislaus County 2012

Approximately 90% of Kings County is designated as farmland (Dudley Ridge Water District 2012). In 2011, most of the agricultural land in the county was used to grow field crops (717,364 acres) (Table 3.2-2). Milk and cattle are also among the top agriculture commodities in the county (Kings County 2012).

In Stanislaus County, most of the agricultural land in 2011 was used to grow field crops (763,316 acres) (Table 3.2-2). Almonds, milk, and chickens were the top three agriculture commodities for the county in 2011 (Stanislaus County 2012).

3.2.2 DISCUSSION

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Implementing the Proposed Project would result in increases in the volume of water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. No new construction or physical alteration of existing SWP facilities would occur. Therefore, implementing the Proposed Project would not result in the conversion of farmland to nonagricultural land use. **No impact** would occur.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

As previously stated, implementing the Proposed Project would not result in new construction or the physical alteration of existing SWP facilities. Therefore, it would not result in conflicts with existing zoning for an agricultural use or land under Williamson Act contract. **No impact** would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

As previously stated, implementing the Proposed Project would not result in new construction or the physical alteration of existing SWP facilities. Therefore, it would not result in conflicts with existing zoning for or the need to rezone forestland, timberland, or timberland zoned Timberland Production. **No impact** would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

As previously stated, implementing the Proposed Project would not result in new construction or the physical alteration of existing SWP facilities. Therefore, it would not result in the loss of forestland or the conversion of forestland to nonforest use. **No impact** would occur.

e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

Implementing the Proposed Project would result in changes to operation of SWP facilities to deliver increased water supplies to the Plaintiff Water Contractors. These changes in operations would result in changes in SOD water deliveries for both municipal and agricultural uses. Table 3.2-3 presents a summary of the estimated changes in the allocations of SWP water to SOD water contractors that receive water for agricultural purposes.

On average, the Proposed Project would have minimal effect on deliveries to SOD water contractors that use supplies for agricultural purposes. On average, SOD water contractors' deliveries would decrease by about 3.93 TAF per year. During dry years, implementing the Proposed Project would result in a reduction of about 7.85 TAF of water per year. Decreases in the availability of SWP water might result in an increased acreage of dry farming, changes to cropping patterns or crop types, removal of farmland from production, and/or the procurement of water from other sources. Table 3.2-4 presents a summary of the range of potential changes in irrigated agriculture by water-year type with implementation of the Proposed Project.

**Table 3.2-3
Estimated Changes in Annual State Water Project Agriculture Water Deliveries (TAF)**

SWP Contractor	Water-Year Type					
	Average	Wet	Above Normal	Below Normal	Dry	Critical
Dudley Ridge Water District	-0.19	-0.12	-0.15	-0.11	-0.38	-0.14
Empire West Side Irrigation District	-0.01	-0.01	-0.01	-0.01	-0.02	-0.01
Kern County Water Agency	-3.35	-2.15	-2.63	-1.91	-6.70	-2.39
Kings County	-0.03	-0.02	-0.02	-0.02	-0.06	-0.02
Oak Flat Water District	-0.02	-0.01	-0.02	-0.01	-0.04	-0.01
Tulare Lake Basin Water Storage District	-0.32	-0.21	-0.25	-0.18	-0.64	-0.23
Total	-3.93	-2.52	-3.08	-2.24	-7.85	-2.80

Notes: SWP = State Water Project; TAF = thousand acre-feet.

Values may not sum to totals because of rounding.

Source: Data compiled by AECOM based on data provided by DWR in 2013 based on CALSIM modeling and *State Water Project Final Delivery Reliability Report 2011* (DWR 2012a) (presented in Table 2-13)

**Table 3.2-4
Estimated Changes in State Water Project Agriculture Irrigated Acres**

SWP Contractor	Water-Year Type ¹					
	Average	Wet	Above Normal	Below Normal	Dry	Critical
Dudley Ridge Water District	-48	-31	-38	-27	-96	-34
Empire West Side Irrigation District	-2	-2	-2	-1	-5	-2
Kern County Water Agency	-837	-538	-658	-479	-1,675	-598
Kings County	-8	-5	-6	-4	-16	-6
Oak Flat Water District	-5	-3	-4	-3	-10	-3
Tulare Lake Basin Water Storage District	-80	-52	-63	-46	-161	-57
Total	-981	-630	-771	-561	-1,963	-701

Notes: SWP = State Water Project.

Values may not sum to totals because of rounding.

¹ Assumes an irrigated agriculture water demand of 4 acre-feet per acre per year (DWR 2012c)

Source: Data compiled by AECOM using Table 3.2-3; Imperial County Farm Bureau 2012

On average, the Proposed Project would have a minimal effect on water availability for agricultural land uses. During above-normal and dry years, there would be a reduction in the ability to irrigate from 771 acres to about 1,963 acres. However, if any irrigated farmland were to be temporarily taken out of irrigation, it could be dry farmed or left fallow. Alternatively, crop patterns or crop types could be changed in response to the reduction in irrigation water availability.

Although implementing the Proposed Project would result in a reduction in the availability of agricultural water, this reduction would not constitute a substantial change when compared to the total acres of farmland in production in the region. In addition, the land would be expected to remain in agricultural use. Therefore, this impact would be **less than significant**.

3.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.3.1 ENVIRONMENTAL SETTING

Implementing the Proposed Project would increase the SWP water allocated to the four Plaintiff Water Contractors. The SCWA and Napa service areas are located in the San Francisco Bay Area Air Basin (SFBAAB), which includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara Counties; the southern portion of Sonoma County; and the southwestern portion of Solano County. The Yuba City and Butte County service areas are located in the Sacramento Valley Air Basin (SVAB), which includes all of Butte, Colusa, Glenn, Shasta, Sutter, Tehama, Yolo, and Yuba Counties; the western portion of Placer County; and the eastern portion of Solano County. An air basin’s boundary is typically established to include areas with similar natural parameters (e.g., climate, meteorology, and topography).

At the local level in the SFBAAB, long-term planning and regulation of air quality is the responsibility of the Bay Area Air Quality Management District (BAAQMD). Air quality planning and regulations in the SVAB are managed by multiple air districts. Yuba City’s air quality planning and regulations are the responsibility of the Feather River Air Quality Management District (FRAQMD), and Butte County’s are the responsibility of the Butte County Air Quality Management District (BCAQMD).

Air quality in all of the service area is also regulated at the federal level by the U.S. Environmental Protection Agency (EPA) and at the state level by the California Air Resources Board (ARB). At the local level, BAAQMD,

FRAQMD, and BCAQMD all develop rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent.

CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS

ARB and EPA focus on the following air pollutants as indicators of ambient air quality: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health and extensive health-effects criteria documents are available, they are commonly referred to as “criteria air pollutants.”

EPA has established primary and secondary national ambient air quality standards (NAAQS) for the following criteria air pollutants: ozone, CO, NO₂, SO₂, respirable particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead. The primary standards protect the public health of the most sensitive populations (e.g., children, elderly, and asthmatics), and the secondary standards protect public welfare (e.g., visibility, vegetation damage). In addition to the NAAQS, ARB has established California ambient air quality standards (CAAQS) for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases, the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health-effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate an additional margin of safety to protect sensitive receptors, particularly children and infants (ARB 2009). The NAAQS and CAAQS are listed in Table 3.3-1.

CALIFORNIA AND NATIONAL AREA DESIGNATIONS

Criteria air pollutant concentrations are measured at several monitoring stations throughout the SFBAAB and SVAB to determine the healthfulness of current air quality conditions. Both ARB and EPA use this type of monitoring data to designate the attainment status with respect to the CAAQS and NAAQS, respectively, for criteria air pollutants. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are “nonattainment,” “attainment,” and “unclassified.” A pollutant is designated “nonattainment” if there was at least one violation of a state standard for that pollutant in the area or “attainment” if the state standard for that pollutant was not violated at any site in the area during a 3-year period. The category of “unclassified” is used in an area that cannot be classified on the basis of available information as meeting or not meeting standards. In addition, the California designations include a subcategory of the nonattainment designation, called nonattainment- transitional. The nonattainment-transitional designation is given to nonattainment areas that are progressing and nearing attainment. The attainment status of the project area portion of SFBAAB and SVAB are shown in Table 3.3-2 and Table 3.3-3.

3.3.2 ANALYSIS METHODOLOGY

Implementing the Proposed Project would not require any short-term construction activities. Long-term operational activities would involve changes in water supply provided to the Plaintiff Water Contractors. These changes would not require additional worker trips or heavy-duty equipment beyond existing conditions.

The proposed changes to SWP water supplied to the Plaintiff Water Contractors would require changes in electricity consumption to provide SWP water to those areas.

**Table 3.3-1
National and California Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards ¹	National Standards ²	
		Concentration ³	Primary ^{3,4}	Secondary ^{3,5}
Ozone	1 hour	0.09 ppm (180 µg/m ³)	—	Same as primary standard
	8 hour	0.070 ppm (137 µg/m ³)	0.075 ppm (147 µg/m ³)	
Respirable particulate matter (PM ₁₀)	24 hour	50 µg/m ³	150 µg/m ³	Same as primary standard
	Annual arithmetic mean	20 µg/m ³	—	
Fine particulate matter (PM _{2.5})	24 hour	—	35 µg/m ³	Same as primary standard
	Annual arithmetic mean	12 µg/m ³	15 µg/m ³	
Carbon monoxide	8 hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	None
	1 hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	
	8 hour (Lake Tahoe)	6 ppm (7 mg/m ³)	—	
Nitrogen dioxide ⁶	Annual arithmetic mean	0.030 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)	Same as primary standard
	1 hour	0.18 ppm (339 µg/m ³)	0.100 ppb (188 µg/m ³)	None
Sulfur dioxide ⁷	Annual arithmetic mean	—	0.030 ppm (for certain areas) ⁷	—
	24 hour	0.04 ppm (105 µg/m ³)	0.14 ppm (for certain areas) ⁷	—
	3 hour	—	—	0.5 ppm (1,300 µg/m ³)
	1 hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)	—
Lead ^{8,9}	30-day average	1.5 µg/m ³	—	—
	Calendar quarter	—	1.5 µg/m ³ (for certain areas) ⁹	Same as primary standard
	Rolling 3-month average	—	0.15 µg/m ³	—
Visibility-reducing particles ¹⁰	8 hour	See footnote 10	No national standards	
Sulfates	24 hour	25 µg/m ³		
Hydrogen sulfide	1 hour	0.03 ppm (42 µg/m ³)		
Vinyl chloride ¹⁰	24 hour	0.01 ppm (26 µg/m ³)		

Notes: mg/m³ = milligrams per cubic meter; PM_{2.5} = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM₁₀ = respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; ppm = parts per million; ppb = parts per billion; µg/m³ = micrograms per cubic meter.

¹ California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility-reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

² National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a

⁷ On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards,

**Table 3.3-1
National and California Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards ¹	National Standards ²
		Concentration ³	Primary ^{3,4} Secondary ^{3,5}
<p>year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standards. Contact EPA for further clarification and current national policies.</p>		<p>the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.</p>	
<p>³ Concentration expressed first in the units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.</p>		<p>Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical of 0.075 ppm.</p>	
<p>⁴ National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.</p>		<p>⁸ The California Air Resources Board (ARB) has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.</p>	
<p>⁵ National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.</p>		<p>⁹ The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved.</p>	
<p>⁶ To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.</p>		<p>¹⁰ In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and the "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.</p>	
<p>Source: ARB 2012a</p>			

**Table 3.3-2
California and National Attainment Status for the San Francisco Bay Area Air Basin**

Pollutant	Designation/Classification	
	California	National
Ozone (1-hour)	Nonattainment	-
Ozone (8-hour)	Nonattainment	Nonattainment
Carbon monoxide (CO)	Attainment	Attainment
Nitrogen dioxide (NO ₂)	Attainment	Attainment/Unclassifiable
Sulfur dioxide (SO ₂)	Attainment	Attainment
Respirable particulate matter (PM ₁₀)	Nonattainment	Unclassified
Fine particulate matter (PM _{2.5})	Nonattainment	Nonattainment ^a
Lead ^c	Attainment	Attainment
Sulfates	Attainment	
Hydrogen sulfide	Unclassified	No national standards
Vinyl chloride	- ^b	

Table 3.3-2 California and National Attainment Status for the San Francisco Bay Area Air Basin		
Pollutant	Designation/Classification	
	California	National
Visibility-reducing particles	Unclassified	
Notes:		
^a EPA lowered the 24-hour PM _{2.5} standard from 65 µg/m ³ to 35 µg/m ³ in 2006. EPA designated BAAQMD as nonattainment of the PM _{2.5} standard on October 8, 2009. The effective date of the designation is December 14, 2009, and BAAQMD has 3 years to develop a State Implementation Plan (SIP) that demonstrates how the region will achieve the revised standard by December 14, 2014. The SIP for the new PM _{2.5} standard must be submitted to EPA by December 14, 2012. BAAQMD is designated as attainment for the annual arithmetic mean.		
^b No information is available to designate the region for vinyl chloride.		
Source: BAAQMD 2012		

Table 3.3-3 California and National Attainment Status for the Sacramento Valley Air Basin (Sutter and Butte County Portions)		
Pollutant	Designation/Classification	
	California	National
Ozone (1-hour)	Nonattainment	–
Ozone (8-hour)	Nonattainment-Transitional ^a	Nonattainment ^b
Carbon monoxide (CO)	Attainment	Unclassifiable/Attainment
Nitrogen dioxide (NO ₂)	Attainment	Unclassified/Attainment
Sulfur dioxide (SO ₂)	Attainment	Unclassified
Respirable particulate matter (PM ₁₀)	Nonattainment	Unclassified
Fine particulate matter (PM _{2.5})	Attainment ^c	Nonattainment ^d
Lead	Attainment	Unclassifiable/Attainment
Sulfates	Attainment	No federal standards
Hydrogen sulfide	Unclassified	
Vinyl chloride	– ^e	
Visibility-reducing particles	Unclassified	
Notes:		
^a Colusa, Sutter, and Yuba Counties of the Sacramento Valley Air Basin (SVAB) are designated as nonattainment-transitional. Other portions of the SVAB, including Butte County, are designated as nonattainment.		
^b Sutter County is designated as unclassified/attainment for the 8-hour federal ozone standard. Butte County is designated as nonattainment for the 8-hour federal ozone standard.		
^c Sutter County is designated as attainment for PM _{2.5} . Butte County is designated as nonattainment for the state PM _{2.5} standard.		
^d Sutter County and a majority of Butte County are designated as nonattainment for the federal PM _{2.5} standard. A portion of Butte County is designated as unclassifiable/attainment.		
^e No information is available to designate the region for vinyl chloride.		
Source: ARB 2012b		

An increase in electricity consumption could result in increased electricity consumption at a power plant. However, the location of the power plant cannot be determined at the time of this writing. It is possible that the location of the electricity generation would not occur in the same air basin as the water delivery. The emissions associated with a power plant would be accounted for in a regional air quality plan as a stationary source. Furthermore, it is highly unlikely that the increased electricity demand associated with the Proposed Project would require the power plant to generate additional electricity in addition to their existing load. Therefore, implementing the Proposed Project would not generate new or unaccounted for air quality emissions.

3.3.3 DISCUSSION

a) Conflict with or obstruct implementation of the applicable air quality plan?

Implementing the Proposed Project would not generate any short-term construction emissions. No additional infrastructure or modifications to existing infrastructure would be required for the Proposed Project. Operational activities associated with the Proposed Project would include increasing water supply to the four Plaintiff Water Contractors. Changes to SWP operations and local water pumping facilities would not generate any direct air quality emissions, such as those associated with vehicle trips or maintenance equipment. Rather, changes in operation as a result of implementing the Proposed Project would result in a minor increase in electricity consumption for the conveyance of water to the four Plaintiff Water Contractors. However, the increase in electricity consumption would not necessarily result in an increased amount of electricity being generated. Rather, the Proposed Project electricity demand is likely accounted for in existing total electricity generation capacity, and existing sources would be shifted to meet the demands of the Proposed Project.

Table 3.3-4 shows that there would be a net reduction in energy demand of about 13,249 Mwh/yr resulting from implementation of the Proposed Project. The net reduction of energy demand results from the reduced SOD deliveries. These deliveries require greater energy to deliver water than to other portions of the SWP service area. The reduction offsets the increased energy demand associated with delivery of the increased NOD water supplies. However, during below-normal water years, the reduced SOD deliveries would not be sufficient to offset the increased energy demand of the NOD deliveries. During these water year types, energy demand and associated air emissions would increase to a minor degree. The additional energy required during these periods is expected to be met by existing power production facilities.

The location of the power generation facility providing the increased electric power is unknown. It may actually be composed of more than one facility, depending on contributions to the energy grid occurring when the energy is needed. The relatively small volume of criteria air pollutants associated with implementing the project would already be accounted for in a power plant's permit and therefore would not be expected to conflict with applicable air quality plans. Therefore, this impact would be **less than significant**.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

As discussed previously, implementing the Proposed Project would not generate any short-term construction or substantial long-term operational air quality emissions. Therefore, implementing the Proposed Project is not expected to violate any air quality standard or contribute substantially to an existing or projected air quality violation. This impact would be **less than significant**.

**Table 3.3-4
Increase in Criteria Air Pollutants Associated with the Proposed Project**

Year Type	Electricity Change (MWh/yr)	Proposed Project (tons/year) ^{1,2}				Electricity Change (MWh/yr)	Proposed Project with Advanced Table A (tons/year) ^{1,2}			
		NO _x	SO _x	CO	PM _{2.5}		NO _x	SO _x	CO	PM _{2.5}
North of Delta										
Average	3,885	0.14	0.02	0.19	0.06	5,892	0.21	0.03	0.29	0.09
Wet	4,177	0.15	0.02	0.21	0.06	4,170	0.15	0.02	0.21	0.06
Above normal	5,461	0.19	0.03	0.27	0.08	5,720	0.20	0.03	0.29	0.09
Below normal	5,941	0.21	0.03	0.30	0.09	6,219	0.22	0.03	0.31	0.09
Dry	2,473	0.09	0.01	0.12	0.04	8,040	0.28	0.04	0.40	0.12
Critical	875	0.03	0.00	0.04	0.01	5,050	0.18	0.03	0.25	0.08
South of Delta ³										
Average						-8,459	-0.30	-0.04	-0.42	-0.13
Wet						-5,439	-0.19	-0.03	-0.27	-0.08
Above normal						-6,647	-0.23	-0.03	-0.33	-0.10
Below normal						-4,834	-0.17	-0.02	-0.24	-0.07
Dry						-16,919	-0.59	-0.08	-0.85	-0.25
Critical						-6,042	-0.21	-0.03	-0.30	-0.09
Maximum combined NOD and SOD emissions										
						—	0.05	0.01	0.07	0.02
Notes: CO = carbon monoxide; MWh/yr = megawatt-hours per year; NOD = north of Delta; PM _{2.5} = fine particulate matter; NO _x = oxides of nitrogen; SOD = south of Delta; SO _x = oxides of sulfur.										
¹ Emissions represent theoretical emissions if electricity was produced by power plants only for the Proposed Project. In reality, the Proposed Project's electricity demand would be accounted for in a power plant's existing permitted criteria air pollutant emissions. It is not anticipated that the Proposed Project's electricity demands would trigger any power plant to increase its permitted emissions limits.										
² Criteria air pollutant emission factors were obtained from California Energy Commission (referenced below).										
³ SOD energy demand was calculated only for the Proposed Project with Advanced Table A.										
Sources: DWR 2012; Loyer and Alvarado 2012										

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Implementing the Proposed Project would not generate any short-term construction or long-term operational air quality emissions. Although operations of the Proposed Project would require additional electricity consumption as a result of increased SWP water conveyance for the NOD water suppliers, this minor increase in electricity consumption would not result in a cumulatively considerable net increase in criteria air pollutant emissions specifically for the Proposed Project. Therefore, implementing the Proposed Project would not generate air quality emissions that would be considered a cumulatively considerable contribution. This impact would be **less than significant**.

d) Expose sensitive receptors to substantial pollutant concentrations?

As discussed previously, implementing the Proposed Project would not generate additional short-term construction or substantial long-term operational air quality emissions. Therefore, no toxic air contaminant emissions would be generated during any phase of the Proposed Project. Hence, implementing the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations. This impact would be **less than significant**.

e) Create objectionable odors affecting a substantial number of people?

Implementing the Proposed Project would not generate short-term construction or substantial long-term operational air quality emissions. Therefore, it would not generate odor emissions during any phase. This impact would be **less than significant**.

3.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.4.1 ENVIRONMENTAL SETTING

This section describes the environmental setting for terrestrial biological resources and fisheries and aquatic habitats present in the service areas of the four Plaintiff Water Contractors: SCWA, Napa, Yuba City, and Butte County.

TERRESTRIAL BIOLOGICAL RESOURCES

This section describes the environmental setting for terrestrial biological resources present in the service areas of the four Plaintiff Water Contractors. Most of the areas receiving SWP supplies consist of urban land uses, which limits the habitats and conditions to support terrestrial biological resources in these areas.

The conditions on Lake Oroville created by surface water fluctuations limit the formation of persistent riparian and wetland vegetation and consequently limit the amount of terrestrial wildlife habitat in the littoral or inundation zones. Although limited, these habitats still provide foraging habitat for numerous birds (raptors, shorebirds, waterfowl, and passerines [i.e., perching and songbirds]); some amphibians and reptiles, primarily frogs and turtles; and mammals. Use by bird species varies seasonally as a function of natural migration into and out of the region and varies depending on the surface water elevation and the extent of human disturbance. For instance, waterfowl are more common during winter, when lake levels are higher and there are fewer disturbances from watercraft. Many passerine species present in spring and summer nest in riparian habitat near or upstream and downstream from the lake or in wetland habitat along shallow and undisturbed shoreline areas. Other species that feed along the shorelines and in open water during parts of the year include species such as osprey, killdeer, loons, grebes, and swallows.

The lower portion of the river, below Lake Oroville, twists and turns through agricultural and developed lands, and most of the riparian forest occurs as linear patches separating agricultural or other developed lands. The most substantial patches of riparian woodland and freshwater marsh occur near the city of Gridley and are associated with river bends, floodplains, and oxbows. The exact nature of the woody riparian vegetation along the water's edge depends on the geomorphic position of the river, the width of the riverbank, and the proximity of the primary levees. Valley oak, cottonwood, and willow trees are the primary tree species, and willow scrub and a variety of native and nonnative riparian shrub and herbaceous species make up the understory. The primary freshwater marsh species are cattail and tule, but a variety of native and nonnative emergent, submerged, and floating species are also found in these areas, which occur on floodplains and oxbows near river bends.

The portion of the Sacramento River in the Butte County service area extends from the northwestern corner of Butte County, just south of the city of Corning, south to where the boundary of the county turns due east, which is due west of the city of Willows. This portion of the Sacramento River is bordered extensively by agricultural land and is generally characterized by the same riparian species found on the lower reaches of the Feather River.

FISHERIES AND AQUATIC HABITATS

The primary fisheries and aquatic habitats in the project area are Lake Oroville, the lower Feather River, lower Sacramento River, the Delta, and San Luis Reservoir. Each is described briefly below.

Lake Oroville

Lake Oroville provides productive habitats for a diverse assemblage of cold- and warm-water fish species. As with most deep lakes and reservoirs in areas with temperate climates, Lake Oroville stratifies thermally each year, meaning that warmer waters are located near the surface and colder waters are located at depth. This two-layered system provides an opportunity for both a cold-water fishery (e.g., salmon and trout) and warm-water fishery (e.g., black bass, catfish) to flourish. During the cooler months, cold-water species such as rainbow trout and brown trout may be found rearing throughout the lake; however, these species do not spawn in the lake, preferring to spawn in tributary streams. During the warmer months, they are typically found in the deeper portions of the reservoir that remain cool year-round. During the summer months, the warmer waters at the surface are generally in the high 70s to mid-80s (Fahrenheit). The warm-water fish of Lake Oroville occupy two ecological zones: the littoral (shoreline/rocky/vegetated) and the pelagic (open water) zones. The littoral zone, which lies along the reservoir shoreline down to the maximum depth of light penetration on the reservoir

bottom, supports populations of spotted bass, smallmouth bass, largemouth bass, black crappie, bluegill, channel catfish, and other warm-water species.

Climate conditions and reservoir storage volume are the two most influential factors affecting cold- and warm-water habitats and primary productivity in Lake Oroville. The presence of cold-water habitat in Lake Oroville is a function of the total storage and associated surface area. This relationship is influenced by variation in the water surface elevation throughout the year. Variation in water surface elevation is a function of water demand, water quality requirements, inflow, and water surface elevation changes related to the water-year type. Typically, primary production in reservoirs is associated with storage volumes when all other factors are held constant (Stables *et al.* 1990). Increased storage and the corresponding increase in surface area result in a greater total biomass and a greater abundance of plankton and fish because available habitat area is increased. Existing reservoir-level fluctuations, associated shoreline erosion, and suppression of shoreline and emergent vegetation are thought to generally be the most significant factors affecting warm-water fish production in reservoirs, including Lake Oroville (Moyle 2002).

Lower Feather River

Aquatic habitats found in the lower Feather River vary as the river flows from releases at the DWR Oroville Dam facilities down to the confluence with the Sacramento River at Verona. At the upper extent, the approximately 8-mile low-flow (about 600 cfs) section contains mainly riffles and runs, which provide spawning habitat for most Feather River Chinook salmon and steelhead. Also present in the low-flow section is a series of remnant gravel pit pools/ponds that connect to the main channel. This stretch is fairly confined by levees as it flows through the city of Oroville. From the downstream end of the low-flow section, the Feather River is fairly active and meanders its way south to Marysville. However, this stretch is bordered by active farmland, which confines the river into an incised channel in certain stretches. Relatively large areas of adjacent farmlands are being restored to floodplain habitat with the relocation of levees to become setback levees.

Lower Sacramento River to Delta

The general character of the lower Sacramento River from the confluence with the Feather River to the Delta is a narrow channel confined by levees with little riparian vegetation. Surrounding agricultural lands and urbanized areas extend to the levees, which have cut the river off from most of its riparian corridor, especially on the eastern side of the river. Most of the levees in this river reach are lined with riprap, allowing the river no erodible substrate. The channel width is fairly uniform, and river bends are static as a result of confinement by levees. Because depth profiles and substrate composition are fairly uniform throughout the area, aquatic habitats are fairly homogenous.

Sacramento–San Joaquin Delta

The Delta and Suisun Bay, on the western edge of the Delta, are located at the confluence of the Sacramento and San Joaquin Rivers and represent an important and complex geographic area for both anadromous and resident fisheries production. The Delta's channels are used to transport water from upstream reservoirs to the south Delta, where federal (C. W. "Bill" Jones Pumping Plant) and state (Banks Pumping Plant) facilities pump water into CVP and SWP canals, respectively.

Environmental conditions in the Delta depend primarily on the physical structure of Delta channels, inflow volume and source, Delta Cross Channel (DCC) operations, Delta exports and diversions, and tides. The CVP and SWP affect Delta conditions primarily through control of upstream storage and diversions, Delta exports and diversions, and DCC operations. These factors also determine outflow and the location of the entrapment zone, which is an area of high organic carbon that is critically important to a number of fish and invertebrate species and to the overall ecology of the Delta and Suisun Bay. In addition to these physical factors, environmental conditions such as water temperature, predation, food production and availability, competition with introduced exotic fish and invertebrate species, and pollutant concentrations all contribute to interactive, cumulative conditions that have substantial effects on Delta fish populations.

An estimated 25% of all warm-water and anadromous sport fishing and 80% of California's commercial fishery depend on species that live in or migrate through the Delta. The Delta serves as a migration path for all Central Valley anadromous species returning to their natal rivers to spawn. Adult Chinook salmon migrate through the Delta during most months of the year. Salmon and steelhead juveniles depend on the Delta as transient rearing habitat during migration through the system to the ocean and could remain for several months, feeding in marshes, tidal flats, and sloughs. In addition, Delta outflow influences the abundance and distribution of fish and invertebrates in the bay through changes to salinity, currents, nutrient levels, and pollutant concentrations. Delta smelt is one of the key species driving many of the ongoing water management decisions in the Delta.

San Luis Reservoir

San Luis Reservoir is largely an offstream storage facility, not originally part of a large river or stream system; however, numerous small drainages were located in this area. Native fish species were likely present in the drainages that were flooded as a result of constructing San Luis Reservoir. The reservoir supports several species of native and nonnative fish that have become established in the system either by direct introduction or from the Delta system via pumping from the California Aqueduct and Delta-Mendota Canal.

3.4.2 DISCUSSION

The Proposed Project would result in modifying SWP allocations to improve water delivery reliability and increase the volume of water that may be delivered to each of the Plaintiff Water Contractors. DWR will continue to meet all existing requirements, including those for water quality and the requirements included in BOs for listed species.

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?**

Terrestrial Biological Resources

Modifying SWP NOD water allocations would increase the volume of water delivered to the service areas of each of the four Plaintiff Water Contractors and, in certain water-year types, decrease the volume of water delivered to SOD water users. The details of the different water-year types and corresponding water deliveries are described in Chapter 2, "Project Description."

Changes in Lake Oroville surface elevation would not exceed 1 foot. Likewise, no change in San Luis Reservoir surface elevation would occur.

Reductions in flow on the Feather River, downstream of Lake Oroville, of about 8 cfs, or 0.40% of the existing river flow, in critical water-year types could occur. Increases on the Sacramento River of about 14 cfs, or about 0.13% of existing river flow, could occur in critical water-year types.

As shown in Table 2-12, implementing the Proposed Project would result in a minor reduction in the volume of reverse flows in the Old and Middle Rivers that occur from operation of CVP and SWP pumps. Downstream flows would be increased as much as 18 cfs. Reverse flows could increase by as much as 4 cfs (-4) during critical water years.

The changes in the surface elevations on Lake Oroville and San Luis Reservoir would not result in changes to shoreline habitat because water surface fluctuations in the lake and reservoir would remain within the existing operating ranges. The shorelines are currently subjected to water-level fluctuations that vary seasonally and year to year. The effect of regular cycles of ascending and descending water surface elevations restricts the formation of riparian, wetland, or other shoreline vegetation; consequently, the mostly barren conditions that result are not suitable for special-status plant and wildlife species. The changes in flow and water levels along the Feather, Sacramento, and Old and Middle Rivers would be minimal and are not expected to be discernible or to reduce riparian and wetland habitat.

Changes to SOD water contractors delivering water for agricultural purposes could potentially affect up to approximately 1,963 acres of irrigated farmland, which could be subject to modified management or irrigated by another water source. The resulting effect on habitat value is not known and would be speculative because of the range of farmland management actions that could be implemented as a result of decreased water deliveries.

As discussed in Section 3.13, "Population and Housing," implementing the Proposed Project would not provide new water supplies beyond what is already anticipated for the service areas of the four Plaintiff Water Contractors. Therefore, no indirect impact on terrestrial resources or habitats would occur.

Fisheries and Aquatic Habitats

Several key hydrologic indicators, discussed below, were used to evaluate the potential for the project to affect sensitive fisheries resources and estuarine habitat conditions: Lake Oroville storage, San Luis Reservoir storage, Feather River flow, Sacramento River flow, Old and Middle River flows, total Delta outflow, X2 location, and SOD water deliveries. No substantial changes to these hydrologic indicators would occur that could result in changes to associated aquatic habitat and fish populations.

Lake Oroville storage volume and water surface elevation is a metric that is useful in analyzing the impact of the project on the Lake Oroville fishery. The timing and duration of storage fluctuation can have an impact on the reproductive success of nearshore spawning fishes (Ploskey 1986). Stable or increasing storage during spring months (March through June) can contribute to increased reproductive success, young-of-year production, and juvenile growth rate of several warm-water species, including the black basses (Ploskey 1986). Consistent inundation of shoreline habitat may also lead to increased structural diversity and availability of spawning substrate or cover for juvenile fishes. Conversely, reduced or variable storage related to reservoir drawdown

during spring spawning months can cause reduced spawning success for warm-water fishes through nest dewatering, egg desiccation, and physical disruption of spawning or nest-guarding activities (Ploskey 1986).

As described in Chapter 2, “Project Description,” water storage volume in Lake Oroville would be reduced by a minimal amount with implementation of the Proposed Project. During fall months in dry and critical years, the volume of water stored in Lake Oroville would be reduced between approximately 1.0 and 2.8 TAF, respectively, when compared to existing conditions. Table 2-6 shows the change in Lake Oroville storage volume for various water-year types. These changes in storage are well within the existing range of variability and would not result in a discernible effect on fish or aquatic habitats in the reservoir.

As described in Chapter 2, the volume of water stored in San Luis Reservoir would be subject to minimal change when compared to existing conditions. Table 2-8 shows the change in San Luis Reservoir storage volume for various water-year types. The greatest reduction in stored water volume would occur in dry water years, with a reduction on the order of about 0.1 TAF.

The lease of SWP water from Butte County to other out-of-county parties might affect stored water volume in San Luis Reservoir, depending on when the lease is made and on the need to store supplies for a short-term period. The specific effect of storing the leased supplies on San Luis Reservoir storage volume and surface elevation would be subject to case-by-case conditions. These changes in storage are well within the existing range of variability and would not result in a discernible effect on fish or aquatic habitats in the reservoir.

Feather River flow is used by a number of fish species, either as direct habitat during one or more of their life stages or as a migration corridor. Flows in the Feather River are important because of their role in providing physical habitat for a variety of fish species and migratory corridors for anadromous fish species, including Chinook salmon, steelhead, and striped bass.

As described in Chapter 2, implementing the Proposed Project would result in minor reductions in Feather River flow downstream of Lake Oroville. As shown in Table 2-10, changes in river flow would range from -8 to +11 cfs. These changes would constitute a change in river flow of less than 0.4%. These changes in flow are well within the existing range of variability and would not result in a discernible effect on fish or aquatic habitats in the Feather River.

Sacramento River flow is the total flow from the Sacramento River entering the Delta, typically measured at Freeport. Similar to the Feather River, the Sacramento River is used by a number of fish species, either as direct habitat during one or more of their life stages or as a migration corridor to upstream habitat in other river systems. Flows in the Sacramento River are important for the same reasons stated above for the Feather River. Flows in the Sacramento River also provide downstream transport and dispersal of planktonic fish eggs and larvae for species such as delta smelt.

As described in Chapter 2, implementing the Proposed Project would result in minor reductions in Sacramento River flow as measured at Freeport. Changes in river flow would range from -5 to +14 cfs (Table 2-11). These changes would constitute a change in river flow of less than 0.13%. These estimated changes in flow would be well within the existing range of variability and would not result in a discernible effect on fish or aquatic habitats in the Sacramento River.

Old and Middle River flows are typically measured as reverse flows resulting from CVP and SWP water pumping operations. Reverse flows in the Old and Middle Rivers are one factor in the south Delta region that appears to be correlated with the entrainment of larval and juvenile fishes. The reverse flows in Old and Middle Rivers result in part from intensive pumping during periods of lower river inflow and limited Delta inflow, rate of water exports, and operations of DCC gates (Arthur *et al.* 1996; Baxter *et al.* 2008:19; Monsen *et al.* 2007:10). Delta smelt abundance had a statistically significant association with monthly and semimonthly measures of net Old and Middle river flows and exports (Manly and Chotkowski 2006, cited in Baxter *et al.* 2008:19). However, the relationship did not hold over the entire survey area and time period, possibly because measures of larval entrainment could not be included in the analyses (Baxter *et al.* 2008:19).

Implementing the Proposed Project would result in a minor increase in Old and Middle river downstream flows. Changes in river flow would range from a reduction of less than 4 cfs to an increase of about 18 cfs (Table 2-12). These changes would constitute a change in river flow of less than 0.34%. These changes in flows would be well within the existing range of variability and would not result in a discernible effect on fish entrainment rate or vulnerabilities in Old and Middle Rivers.

Total Delta outflow is the net amount of water (not including tidal flows) at a given time flowing out of the Delta toward the San Francisco Bay. It provides an indicator of freshwater flow passing through the Delta and habitat conditions farther downstream in the San Pablo Bay and central San Francisco Bay. Delta outflow affects salinity gradients in these downstream aquatic habitats and the geographic distribution and abundance of various fish and macroinvertebrates.

Implementing the Proposed Project could result in a minor decrease in Delta outflow. On average, changes in Delta outflow would be reduced by about 4 cfs (Table 2-13). These changes would constitute, on average, a change in outflow volume of less than 0.02%. These estimated changes in Delta outflow would be well within the existing range of variability and would not result in a discernible effect on fish or aquatic habitats in the west Delta.

X2 location is the distance from the Golden Gate Bridge to where the 2-ppt salinity isohaline is located. The X2 location has been identified as an important indicator of estuarine habitat conditions in the Bay-Delta system. The location of X2 in Suisun Bay during the February through June period is thought to be directly or indirectly related to the reproductive success and survival of the early life stages of a number of estuarine species. Results of statistical regression analyses suggest that the abundance of several estuarine species is greater when the X2 location during spring occurs in the western portion of Suisun Bay and that abundance is lower in those years when the X2 location is farther to the east, near the confluence between the Sacramento and San Joaquin Rivers.

The Suisun Region, and particularly Suisun Marsh, is characterized by high productivity. The marsh has many dendritic sloughs and channels that provide a high-quality feeding environment (Baxter *et al.* 2007:25). The small tidal marsh sloughs are considered critical source regions for copepods, including the species upon which delta smelt rely (Mueller-Solger *et al.* 2006, cited in Baxter *et al.* 2007:25). Contributing to the high productivity in the Suisun Region in general is the fact that it is generally the location of the estuarine front, also known as the low-salinity zone (LSZ) or entrapment zone (Nobriga *et al.* 2008:2). This zone is the location in an estuary where the interaction between hydrodynamics and organism behavior results in aggregations of turbidity, plankton, and young fishes (Nobriga *et al.* 2008:2). Larval and juvenile fish, including delta smelt and longfin smelt (Baxter *et al.* 2007:5), can maintain their position in the LSZ and experience high feeding success because of the high

densities of zooplankton there (Dodson *et al.* 1989, cited in Nobriga *et al.* 2008; Kimmerer *et al.* 1998:1697). Young-of-the-year delta smelt rear in the LSZ from late spring to early winter, experiencing high growth rates (USFWS 2008:150) and reaching adult size by early fall (Moyle 2002). Anadromous fish including longfin smelt larvae, steelhead fry, and Chinook salmon fry rear in the vicinity of the LSZ (Kimmerer 2002a:42), and as they grow they move increasingly seaward of the front and eventually move into the coastal ocean (Emmett *et al.* 1991, cited in Kimmerer 2002b; IEP 2006; Moyle 2002).

Significant statistical relationships exist between the position of X2 and many estuarine resources, including phytoplankton; benthic macroinvertebrates (mollusks); mysids and shrimp; larval fish survival; and the abundance of planktivorous, piscivorous, and bottom-foraging fish (Jassby *et al.* 1995).

Changes in Delta inflow, Delta outflow, and the volume of water exported to SOD contractors resulting from implementing the Proposed Project would theoretically result in a minor relocation of the X2 isohaline. If the X2 isohaline were moved away from a required compliance position or these changes prevented a required outflow from being met, SWP operations would be adjusted to meet such requirements. Implementing the Proposed Project could result in relocating the position of the X2 isohaline either upstream or downstream from its present location by 0.1 kilometer (km) (328 feet) (Table 2-14). This change can be calculated using the CALSIM model; in practice, however, no change in X2 would occur because DWR would operate the SWP to ensure compliance with regulatory requirements. Changes in SWP operations would be performed in accordance with D-1641 limits and water quality regulatory requirements specified in applicable BOs.

However, even if X2 were to move, the calculated changes in X2 position would be well within the existing range of variability and would not result in a discernible effect on fish or aquatic habitats in the west Delta.

Water temperatures found in Lake Oroville, San Luis Reservoir, the Sacramento and Feather Rivers, and Delta waterways would not appreciably change with the estimated minor changes in reservoir storage or downstream river flow. Because the SWP would continue to be operated in compliance with all applicable regulations, no changes in downstream conditions are expected that would result in a change to water temperature. Therefore, the Proposed Project would have no effect on aquatic species or habitat values as a result of changes to water temperature.

SOD water deliveries are measured as the amount of water diverted from the south Delta to the CVP and SWP canals for delivery to SOD water contractors. Changes in diversions to achieve the deliveries are an indicator of potential for direct and indirect fish losses. An increase in these deliveries (achieved by exports) would indicate a potential increase in the risk of fish entrainment and salvage mortality at the CVP and SWP export facilities.

Implementing the Proposed Project would require changes in operations of SWP facilities to deliver increased water supplies to the Plaintiff Water Contractors. Water that otherwise would have flowed to San Francisco Bay as Delta outflow, would have been exported to SOD contractors as part of SWP Table A supplies, or would have been delivered to either the Plaintiff Water Contractors or SOD water contractors as Article 21 water supplies would now be delivered to the Plaintiff Water Contractors as Table A water supplies.

Table 2-15 shows the estimated change in deliveries to SOD water contractors. As shown, it is estimated that the greatest reductions of about 0.4% and 1.26% could occur during above-normal and dry water years, respectively. Although these minor changes in deliveries have been estimated, in practice they would not likely occur because of how the SWP is operated. Because SWP operating decisions address much larger volumes of water, the minor

changes calculated by CALSIM are not expected to occur. These changes do not reflect the long-term water leases to parties located south of the Delta by the Butte County settlement agreement. These estimated changes in water deliveries to SOD contractors would be well within the existing range of variability and would not result in a discernible effect associated with the risk of fish entrainment and salvage mortality at the CVP and SWP export facilities.

In summary, hydrologic modeling results for the Proposed Project show no substantial changes in reservoir water storage levels or flows that would, in turn, be expected to have a discernible effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species. In those months with estimated changes, most of the changes are very small and within the margin of error of the models and/or range of existing variability. As a result, this impact would be **less than significant**.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?

No riparian habitat or other sensitive natural community would be directly altered or removed, and as described previously, the reduced storage and flows that would occur in certain water-year types because of the modified SWP water allocations and deliveries would not have a substantial adverse effect on lakeshore or riparian or wetland habitat. Therefore, the impact on riparian habitat or other sensitive community would be **less than significant**.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No wetlands or other waters of the United States would be directly affected, and as described previously, the reduced storage and flows that would occur in certain water-year types because of the modified SWP water allocations and deliveries would not have a substantial adverse effect on wetlands or federally protected waters. Therefore, the impact on wetlands or other waters of the United States would be **less than significant**.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Implementing the Proposed Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors and would not impede the use of native wildlife nursery sites. As described previously, the small seasonal reductions in storage and flows that would occur in certain months of certain water-year types because of the modified SWP water allocations and deliveries would be minimal and within the existing range of variability. They would not be expected to have a substantial adverse effect on native fish or wildlife species or their habitats. Therefore, the impact on the movement, migratory corridors, and nursery sites of native fish and wildlife would be **less than significant**. Additional detail is presented above in the discussion of checklist item (a).

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

County and city general plans and ordinances associated with the local governments in the service areas of the Plaintiff Water Contractors identify policies and goals designed to protect and conserve biological resources; however, no terrestrial habitat or biological resources, including trees, would be directly affected by the reduction in storage and flows that would occur in certain water-year types because of the modified SWP water allocations and deliveries. Because no adverse effects on biological resources—and therefore no conflict with any local policies or ordinances—are expected, **no impact** would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

None of the service areas of the Plaintiff Water Contractors are covered by an adopted habitat conservation plan (HCP) or natural community conservation plan (NCCP). Therefore, implementing the Proposed Project would not conflict with an adopted HCP, NCCP, or other approved HCP. **No impact** would occur.

Because the Proposed Project would not result in a substantial change to the existing Operations Criteria and Plan (OCAP) as agreed to by the U.S. Bureau of Reclamation (Reclamation) and DWR, the existing biological opinions, developed by USFWS and NMFS, would remain in effect and continue to guide the operation of the SWP. Therefore, implementing the Proposed Project would not conflict with existing plans, policies, or regulations of the California Department of Fish and Wildlife (CDFW) or USFWS.

3.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.5.1 ENVIRONMENTAL SETTING

The SWP is a water storage and conveyance project of statewide significance that includes aqueducts, canals, pipelines, and storage and pumping facilities. The California Legislature authorized the SWP in 1959. Passage of the Burns-Porter Act by the public expressly authorized the State of California to enter into contracts for the sale, delivery, and use of SWP water made available by the operation of the SWP facilities (Water Code, Section 12937[b][4]).

3.5.2 DISCUSSION

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Implementing the Proposed Project would not result in the demolition or alteration of buildings or structures; would not introduce new facilities, so the historical setting of historical resources (as defined in Section 15064.5[a] of the CEQA Guidelines) would not be affected; and would not result in any other actions (as defined in Section 15064.5[b] of the CEQA Guidelines) that could change the significance of historical resources. Therefore, **no impact** on historical resources would occur.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

As stated previously, implementing the Proposed Project would not result in ground disturbance. For this reason, it could not potentially damage or destroy archaeological resources; would not introduce new facilities, so the historical setting of archaeological resources (as defined in Section 15064.5[a] of the CEQA Guidelines), would not be changed; would not damage or destroy unique archaeological resources (as defined in Section 21083.2 of the Public Resources Code); and would not result in any other actions (as defined in Section 15064.5[b] of the

CEQA Guidelines) that could change the significance of archaeological resources. Therefore, **no impact** on archaeological resources would occur.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

As stated previously, implementing the Proposed Project would not result in ground disturbance. For this reason, it could not potentially damage or destroy paleontological resources or unique geological features or formations and would not result in any other actions that could damage or destroy paleontological or geological resources. Therefore, **no impact** on unique paleontological or unique geological resources would occur.

d) Disturb any human remains, including those interred outside of formal cemeteries?

As stated previously, implementing the Proposed Project would not result in ground disturbance. For this reason, it could not potentially damage or destroy human remains, including those outside of a formal cemetery; would not result in the disinterment or exposure of human remains; and would not result in any other actions (as defined in Section 15064.5[d] of the CEQA Guidelines) that could affect human remains. Therefore, **no impact** on human remains would occur.

3.6 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Geology and Soils. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.6.1 ENVIRONMENTAL SETTING

The geographic area that would be affected by implementing the Proposed Project extends across six of the 11 geomorphic provinces in California: the Sierra Nevada, the Great Valley, the Coast Ranges, the Transverse Ranges, the Peninsular Ranges, and the Colorado Desert (California Geological Survey 2002).

The service areas of the four Plaintiff Water Contractors are located primarily in the Great Valley Geomorphic Province, a valley trough more than 50 miles wide and 400 miles long that includes the Sacramento and the San Joaquin Valleys. The Sacramento Valley is drained by the Sacramento River from the north. The San Joaquin Valley is composed of the San Joaquin River basin, drained by the San Joaquin River from the south, and the Tulare basin, a hydrologically closed basin drained only during extremely wet periods. The confluence of these two major river systems and lesser streams and systems forms the Delta, which is drained through Suisun Bay and

the narrow Carquinez Strait to San Pablo and San Francisco Bays and eventually into the Pacific Ocean (CALFED 2000:5.5-4).

Lake Oroville is located in the Sierra Nevada Geomorphic Province. The Feather River watershed, which lies in the northern portion of this geomorphic province, drains the western slope of the Sierra Nevada and is tributary to the Sacramento River. San Luis Reservoir and portions of the SCWA and Napa water contractor service areas are situated in the 600-mile-long Coast Ranges Geomorphic Province. The western portion of the Napa Valley is drained by the Napa River and its tributaries to San Pablo Bay, and the eastern portion is drained by Putah Creek and its tributaries into Lake Berryessa. The Suisun Valley, composed of portions of Suisun City and Fairfield, is drained by Suisun Creek to Suisun Marsh and Suisun Bay.

Landslides can occur in a variety of rock and soil types but are more prevalent in areas where a distinct zone of weakness separates the slide material from more stable underlying material. Risk of landslide in reservoirs is increased by rapid drawdown conditions and by the submergence of the slope toe (Alonso and Pinyol 2011). Slope instabilities around reservoirs, whether induced or not by stored water, create additional risks, such as damage to the dam and its foundation or partial or complete blockage of storage water intake pumps (Alonso and Pinyol 2011).

Landslides are common along the banks of Lake Oroville and are concentrated along the North Fork arm (Bloomer Hill area) and the South Fork arm (Stringtown Mountain area), primarily in areas composed of granitic and metamorphic rocks and areas upstream of the reservoir on the Upper and Middle Feather Rivers (DWR 2007).

Some landslide toes are now inundated by Lake Oroville, and several smaller failures have occurred along the toe of these large landslides, indicating that these features may be reactivated. Areas of confirmed landslides that have been mapped in the Lake Oroville SRA cover an area of approximately 4,154 acres. Of that area, 328 acres (8%) are active, 579 acres (14%) are inactive, and the remaining 3,246 acres (78%) are ancient landslides. Approximately 75,000 feet (less than 8%) of the total shoreline of Lake Oroville is mapped as landslide material (DWR 2007). The erosion-prone soils and landslides are a potential concern regarding visitor safety at the Lake Oroville SRA (State Parks 2004). In 1981, a substantial reservoir-induced landslide at San Luis Reservoir occurred during a period of reservoir water surface drawdown. The drawdown rate for that year was approximately 0.6 foot per day, and the surface of the reservoir dropped 180 feet, which was a more substantial change than in previous years (Alonso and Pinyol 2011).

The Sierra Nevada and Central Valley generally move together as an independent block, the eastern margin of which is formed by faults of the Sierra Nevada Fault Zone, including the Foothills Fault System (DWR 2007; Cramer *et al.* 1978). The seismically active San Andreas Fault System, which borders the Coast Ranges on the east, includes the San Andreas, Hayward, Calaveras, Rogers Creek, Antioch, Green Valley–Concord, and Greenville Faults. San Luis Reservoir is situated in a seismically active area among the San Andreas, Ortigalita, and Calaveras Faults.

3.6.2 DISCUSSION

- a) **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**
 - i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)**

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. No new construction or physical alteration of existing SWP facilities would occur. Therefore, loss, injury, or death would not occur as a result of rupture of a known earthquake fault on or in the vicinity of the Proposed Project. **No impact** would occur.

- ii) **Strong seismic ground shaking?**

Because implementing the Proposed Project would not involve new construction or physical alteration of existing SWP facilities, **no impact** would occur.

- iii) **Seismic-related ground failure, including liquefaction?**

Because implementing the Proposed Project would not involve new construction or physical alteration of existing SWP facilities, **no impact** would occur.

- iv) **Landslides?**

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. No new construction or physical alteration of existing SWP facilities would occur.

As discussed in Chapter 2, "Project Description," implementing the Proposed Project would cause monthly water elevation fluctuations of up to 2 feet compared with existing conditions at Lake Oroville and San Luis Reservoir during certain water years. These minor changes could result in potential increases in the extent of exposed soil side slopes during periods of increased drawdown. This increased exposure has the potential to contribute to the activation of landslides or the reactivation of existing landslides; however, the drawdown of an additional 1 or 2 feet would be infrequent and would not change the existing drawdown rate.

In addition, the minimum water surface elevation during existing operations would not be exceeded at Lake Oroville or San Luis Reservoir. No increase in the risk of sideslope landslides in Lake Oroville or San Luis Reservoir would occur. **No impact** would occur.

- b) **Result in substantial soil erosion or the loss of topsoil?**

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. No new construction or physical alteration of existing SWP facilities would occur. As discussed in Chapter 2, "Project

Description,” implementing the Proposed Project would cause monthly water elevation fluctuations of up to 2 feet compared with existing conditions at Lake Oroville and San Luis Reservoir. These minor changes might result in potential increases in soil erosion by wind, wave, or rainfall because a larger area of bare soils, or a “bathtub ring,” would be exposed during periods with increased drawdown. Although there is a potential for soil erosion to increase during certain periods of the year with changes in existing operations, the periods of increased drawdown would be intermittent, and the effect would be partially offset by a potential decrease in soil erosion potential other times of the year when water elevations would be higher than existing conditions.

As described in Section 3.2, “Agriculture and Forestry Resources,” implementing the Proposed Project could affect 670 acres of agriculture lands during above-normal or below-normal water years, resulting in increased fallowing or dry-farmed acreage or changes in crop patterns or crop types. These changes could lead to increased wind erosion rates. However, these changes would occur only during above- or below-normal water years. This impact would be **less than significant**.

- c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?**

Implementing the Proposed Project would not involve any construction, placement of structures on an unstable geological unit, or physical modification to existing SWP facilities; therefore, **no impact** would occur.

- d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?**

Implementing the Proposed Project would not involve any construction or physical modification to existing SWP facilities; therefore, **no impact** would occur.

- e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

Implementing the Proposed Project would not involve any construction or physical modification to existing SWP facilities. Because no new wastewater systems would be constructed and no existing wastewater systems would be altered as part of the project, **no impact** would occur.

3.7 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Greenhouse Gas Emissions. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.7.1 ENVIRONMENTAL SETTING

In May 2012, DWR adopted its *Climate Action Plan Phase 1: Greenhouse Gas Emissions Reductions Plan* (GGERP), which details DWR’s efforts to reduce its greenhouse gas (GHG) emissions consistent with Executive Order S-3-05 and the Global Warming Solutions Act of 2006 (Assembly Bill 32) (DWR 2012). DWR also adopted an IS/ND prepared for the GGERP in accordance with the CEQA Guidelines review and public process. Both the GGERP and the IS/ND are incorporated herein by reference and are available at <http://www.water.ca.gov/climatechange/CAP.cfm>. The GGERP provides estimates of historical (back to 1990), current, and future GHG emissions related to operations, construction, maintenance, and business practices (e.g., building-related energy use). The GGERP specifies aggressive 2020 and 2050 emission reduction goals and identifies a list of GHG emissions reduction measures to achieve these goals.

DWR specifically prepared its GGERP as a “Plan for the Reduction of Greenhouse Gas Emissions” for purposes of CEQA Guidelines Section 15183.5. That section provides that such a document, which must meet certain specified requirements, “may be used in the cumulative impacts analysis of later projects.” Because climate change, by its nature, is a global cumulative impact, an individual project’s compliance with a qualifying GHG reduction plan may suffice to mitigate the project’s incremental contribution to that cumulative impact to a level that is not “cumulatively considerable” (CEQA Guidelines, Section 15064[h][3]).

More specifically, “[l]ater project-specific environmental documents may tier from and/or incorporate by reference” the “programmatic review” conducted for the GHG emissions reduction plan. “An environmental document that relies on a GHG reduction plan for a cumulative impacts analysis must identify those requirements specified in the plan that apply to the project, and, if those requirements are not otherwise binding and enforceable, incorporate those requirements as mitigation measures applicable to the project” (CEQA Guidelines Section 15183.5[b][2]).

Section 12 of the GGERP outlines the steps that each DWR project will take to demonstrate consistency with the GGERP. These steps include (1) analysis of GHG emissions from construction of the project, (2) determination that the construction emissions from the project do not exceed the levels of construction emissions analyzed in the GGERP, (3) incorporation into the design of the project DWR’s project-level GHG emissions reduction strategies, (4) determination that the project does not conflict with DWR’s ability to implement any of the

“Specific Action” GHG emissions reduction measures identified in the GGERP, and (5) determination that the project would not add electricity demands to the SWP system that could alter DWR’s emissions reduction trajectory in such a way as to impede its ability to meet its emissions reduction goals. Appendix B presents estimates of GHG emissions associated with the project and the DWR determination of consistency with the GGERP.

3.7.2 DISCUSSION

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Based on the analysis provided in the GGERP and the demonstration that the Proposed Project is consistent with the GGERP, DWR as the lead agency has determined that the Proposed Project’s incremental contribution to the cumulative impact of increasing atmospheric levels of GHGs would be less than cumulatively considerable and therefore **less than significant**.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Based on the analysis provided in the GGERP and the demonstration that the Proposed Project is consistent with the GGERP pursuant to DWR’s Consistency Determination Checklist submitted pursuant to Section 12 of the GGERP, DWR as the lead agency has determined that the Proposed Project would not conflict with any plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Thus, this impact would be **less than significant**.

3.8 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Hazards and Hazardous Materials. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.8.1 ENVIRONMENTAL SETTING

The maintenance and operation of SWP facilities, including dams, storage reservoirs, pump stations, and other diversion facilities, require minor amounts of hazardous materials. SWP water used for municipal purposes is disinfected, commonly by using hazardous substances, such as chlorine or hypochlorite, before it is distributed to end users. SWP water supplies provided to SCWA, Napa, and Yuba City are used for municipal use, and SWP water provided to Butte County is used for both municipal and agricultural uses.

3.8.2 DISCUSSION

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Implementing the Proposed Project would result in an increase in the volume of SWP water delivered to the four Plaintiff Water Contractors for municipal water uses. An increase in SWP water deliveries and in the distribution of SWP water supplies would require an increase in water treatment. Hazardous materials may be used more frequently and in larger volumes to treat and disinfect SWP water supplies under the Proposed Project than under existing conditions; however, such changes would be only incrementally greater and would remain within the normal operating procedures of the local water purveyors. Therefore, this impact would be **less than significant**.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

As stated previously, changes in operation and in the distribution of SWP water supplies might result in increased use of hazardous materials to disinfect water; however, because water disinfection systems would not need to be expanded as a result of implementing the Proposed Project, no changes to existing hazards would be introduced to the public by the Proposed Project. Therefore, **no impact** would occur.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

As stated previously, implementing the Proposed Project would not involve new construction or physical alteration of existing SWP facilities; therefore, **no impact** would occur.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

As stated previously, implementing the Proposed Project would not involve new construction or physical alteration of existing SWP facilities; therefore, **no impact** would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

The Proposed Project involves implementing a new SWP water allocation to the four Plaintiff Water Contractors; it does not involve making changes to land use. Therefore, implementing the project would not expose people residing or working in the project area to a safety hazard associated with a public airport or public use airport. **No impact** would occur.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

The Proposed Project involves implementing a new SWP water allocation to the four Plaintiff Water Contractors; it does not involve making changes to land use. Therefore, implementing the project would not expose people residing or working in the project area to a safety hazard associated with a private airstrip. **No impact** would occur.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

As stated previously, implementing the Proposed Project would not involve new construction or physical alteration of existing SWP facilities; therefore, **no impact** would occur.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

As stated previously, implementing the Proposed Project would not involve new construction or physical alteration of existing SWP facilities; therefore, it would not expose people or structures to wildland fires. **No impact** would occur.

3.9 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hydrology and Water Quality. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Result in inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.9.1 ENVIRONMENTAL SETTING

Various water quality and flow objectives have been established to ensure that the quality of water in waterways used for conveyance of SWP water and the Delta is sufficient to satisfy designated beneficial uses. As described in Chapter 2, “Project Description,” SWP operations are also regulated by D-1641.

Chapter 2 further describes the flow conditions in affected waterways downstream of Lake Oroville and the Delta. Water quality in the Sacramento and Feather Rivers has been identified by the State of California as impaired by copper; mercury; toxicity; and more than 15 pesticides, including diazinon, chlorpyrifos, and lindane (SWRCB and EPA 2011). Water quality in the Delta is affected by a multitude of factors, including upstream reservoir releases, tidal influence, agricultural discharges, and the export rates of the SWP and the CVP. EPA and the SWRCB have classified the Delta waterways as impaired for chlorpyrifos, DDT, diazinon, electrical conductivity, Group A pesticides, invasive species, mercury, and unknown toxicants (SWRCB and EPA 2011).

3.9.2 DISCUSSION

a) **Violate any water quality standards or waste discharge requirements?**

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These changes would not result in discharges of pollutants, changes to stormwater runoff, or substantial siltation or erosion, which are the primary origins of water quality violations.

As presented in Chapter 2, “Project Description,” implementing the Proposed Project would result in minor changes in water stored in reservoirs and water volumes conveyed through downstream waterways. Changes to operations of the SWP would theoretically result in a minor relocation of the X2 isohaline, an indicator of Delta water quality. Implementing the Proposed Project could result in relocating the position of the X2 isohaline about 328 feet upstream or downstream from its present location (Table 2-14).

The estimated change in X2 position would not result in a discernible effect on overall water quality. Changes in SWP operations would be performed in accordance with D-1641 limits and water quality regulatory requirements specified in applicable biological opinions, including X2 compliance positions. If the X2 isohaline were moved away from a required compliance position or these changes prevented a required outflow from being met, SWP operations would be adjusted to meet such requirements. The impact would be **less than significant**.

b) **Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?**

Implementing the Proposed Project would result in changes to operation of SWP facilities to deliver increased SWP water supplies to the Plaintiff Water Contractors. It would not require any new construction or placement of structures that could interfere with groundwater recharge. Proposed changes in operations would result in changes in NOD water deliveries for municipal uses and SOD water deliveries for both municipal and agricultural uses. Implementing the Proposed Project would increase the amount of water available to NOD contractors, which might reduce the demand for local groundwater supplies. This possible reduction in the reliance on groundwater might have a beneficial impact on groundwater supplies and associated water table levels.

As described in Chapter 2, “Project Description,” implementing the Proposed Project would result in reductions in annual deliveries to SOD water contractors of 11 TAF and 28 TAF during above-normal and dry water years,

respectively. Decreases in the availability of SWP water might result in the procurement of water from other sources, including increased groundwater pumping.

Among the SOD water contractors, the Metropolitan Water District of Southern California (MWD) and Kern County Water Agency receive more than 70% of the total of SOD allocation and may require the procurement of water from other sources to meet their existing water demands during above- and below-normal water years. Kern County Water Agency practices conjunctive use of surface water and groundwater sources, as well as groundwater banking. Given the capacity of existing groundwater supplies available to the agency, there would be minimal impacts on the groundwater table if groundwater were to be procured to compensate for the reduction in deliveries associated with implementing the Proposed Project. MWD water supplies include water from the Colorado River Aqueduct; CVP storage water and transfers; surface water stored at MWD and DWR reservoirs; regional groundwater and conjunctive use storage programs; and other local water supplies from the Los Angeles Aqueduct, groundwater from member-agency groundwater basins, and surface water diversions from member-agency water entitlements (MWD 2010:1-6).

Because the reduction in SOD water deliveries would occur only during certain water-year types, groundwater supplies are closely managed, and the supplemental water supplies available to the MWD are diverse, impacts on groundwater would be minor. Similarly, if groundwater were procured to compensate for the reductions in deliveries in above-normal and below-normal water years by other affected water contractors, impacts on groundwater sources would be minor, given the amount of water required to compensate for reductions in deliveries and the intermittent need to offset the deduction in deliveries. The impact would be **less than significant**.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. As described in Chapter 2, "Project Description," implementing the Proposed Project would result in minor changes in water flows in downstream waterways, and the changes would not cause substantial erosion or siltation. The impact would be **less than significant**.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?

Implementing the Proposed Project would result in increases in the volume of water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These minor changes in operations would not require any new construction, physical alteration of the ground surface, or change in the amount of surface water runoff; therefore, **no impact** would occur.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Implementing the Proposed Project would result in increases in the volume of water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These minor changes in operations would not require any new construction, physical alteration of the ground surface, or change in the amount of surface water runoff; therefore, **no impact** would occur.

f) Otherwise substantially degrade water quality?

As discussed for item (a) above, implementing the Proposed Project would not result in discharges of pollutants, changes to stormwater runoff, or substantial siltation or erosion; however, changes in operations would result in minor reductions in water flow or volume in some areas of the SWP conveyance system. These changes in flow and water volumes are described in Chapter 2, "Project Description."

Although there may be a small change in river flows and water volume, the changes would be minor and would not cause a concentration of an existing pollutant to adversely affect water quality for certain beneficial uses. SWP operations would be adjusted as necessary to meet D-1641 flow requirements, which are designed to optimize water quality for designated beneficial uses. The minor changes in reservoir storage, river flow, and Delta hydrology would not have an appreciable or observational effect on water temperature. The impact of the Proposed Project on water quality would be **less than significant**.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These minor changes in operations would not require any new construction or placement of housing in a 100-year floodplain; therefore, **no impact** would occur.

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These minor changes in operations would not require any new construction or placement of structures in a 100-year flood hazard area; therefore, **no impact** would occur.

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These changes would not involve new construction or place structures in a dam inundation area. Implementing the Proposed Project would result in negligible changes in water volumes conveyed through downstream waterways and water

stored in reservoirs compared with existing conditions; therefore, it would not increase the potential for flooding as a result of levee or dam failure. **No impact** would occur.

j) Result in inundation by seiche, tsunami, or mudflow?

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These minor changes in operations would not require any new construction or placement of structures that could become inundated by seiche, tsunami, or mudflow; therefore, **no impact** would occur.

3.10 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Land Use and Planning. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.10.1 ENVIRONMENTAL SETTING

This discussion characterizes existing and planned land uses in the service areas of the four Plaintiff Water Contractors.

The SCWA service area consists of the cities of Benicia, Dixon, Fairfield, Rio Vista, Suisun City, Vacaville, and Vallejo. Identification of existing and planned land uses in the SCWA service area was based on a review of the *City of Benicia General Plan* (City of Benicia 1999), *Dixon 1993 General Plan* (City of Dixon 1993), *City of Fairfield General Plan* (City of Fairfield 2002), *City of Rio Vista General Plan 2001* (City of Rio Vista 2001), *City of Suisun City General Plan* (City of Suisun City 1992), *City of Vacaville General Plan* (City of Vacaville 2007), and *Vallejo General Plan* (City of Vallejo 1999).

The Napa water service area includes the cities of American Canyon, Calistoga, and Napa in Napa County. Identification of existing and planned land uses in the Napa service area was based on a review of the *City of American Canyon General Plan* (City of American Canyon 2011a), *City of Calistoga General Plan* (City of Calistoga 2003), *City of Napa General Plan* (City of Napa 2010), *City of American Canyon Final Urban Water Management Plan 2010* (City of American Canyon 2011b), and *City of Napa Urban Water Management Plan 2010 Update* (City of Napa 2011).

The Yuba City water service area consists of Yuba City, and identification of existing and planned land uses in Yuba City was based on a review of the *Yuba City General Plan* (City of Yuba City 2004) and the *Yuba City 2010 Urban Water Management Plan* (City of Yuba City 2011).

In the Butte County water service area, SWP water is purchased by the Del Oro Water Company and the Oroville District of Cal Water. The Del Oro Water Company serves Lime Saddle, Magalia, and Paradise Pines in the unincorporated area of Butte County near the town of Paradise and Stirling Bluffs in the city of Stirling (Butte County 2010a:3-8). Cal Water serves approximately 75% of the city of Oroville in the southeastern portion of Butte County (Cal Water 2011).

Identification of existing and planned land uses in the Butte County water service area was based on a review of the *Butte County General Plan 2030 Draft EIR* (Butte County 2010a), *Butte County General Plan 2030* (Butte County 2010b), *Oroville 2030 General Plan* (City of Oroville 2009), the Del Oro Water Company Paradise Pines District 2000 *Water Management Program* (Del Oro Water Company, Paradise Pines District 2000), and *2010 Urban Water Management Plan—Oroville District* (Cal Water 2011).

Table 3.10-1 identifies existing and planned land uses for each of the SWP water recipients in the water service areas of the four Plaintiff Water Contractors.

Table 3.10-1 Existing and Planned Land Uses in the Water Service Areas of the Four Plaintiff Water Contractors		
SWP Water Recipient	Existing Land Uses	Planned Land Uses
SCWA Water Service Area		
City of Benicia	Primarily industrial uses; low-density, medium-density, and high-density residential uses; parks and open space; and some small areas of commercial uses	Primarily development of industrial uses and some low-density, medium-density, and high-density residential development
City of Dixon	Low-density, medium-density, and high-density residential uses; commercial, business, and light industrial uses; public and quasi-public uses; and parks and open space uses	Primarily low-density, medium-density, and high-density residential uses in the city and its sphere of influence
City of Fairfield	Low-density, medium-density, and high-density residential uses; commercial, business, and light industrial uses; public and quasi-public uses; and parks and open space uses	Primarily low-density, medium-density, and high-density residential uses with some commercial and light industrial development
City of Rio Vista	Primarily low-density residential uses with small areas of commercial and industrial uses, and the Rio Vista Airport	Residential development with some commercial and light industrial development
City of Suisun City	Low-density, medium-density, and high-density residential uses; commercial, business, and light industrial uses; public and quasi-public uses; recreational uses at the Suisun City Marina; and parks and open space uses	Infill development of vacant or underutilized parcels and development of commercial uses
City of Vacaville	Rural, low-density, and medium-density residential uses with small areas of high-density residential uses; commercial, business, and industrial uses; parks and open space uses; the Nut Tree Airport; and the California State Prison, Solano	Primarily low-density, medium-density, and high-density residential uses in the city and its sphere of influence and small areas of commercial uses
City of Vallejo	Low-density, medium-density, and high-density residential uses; commercial, business, and light industrial uses; public and quasi-public uses; and parks and open space uses	Low-density, medium-density, and high-density residential uses; infill and additional development in the downtown and waterfront areas; and commercial and industrial uses
Napa Water Service Area		
City of American Canyon	Low-density, medium-density, and high-density residential uses and commercial, business, and light industrial uses	Development of multifamily residential in the city's Priority Development Area, a mixed-use town center, and a resort and golf course

**Table 3.10-1
Existing and Planned Land Uses in the Water Service Areas of the Four Plaintiff Water Contractors**

SWP Water Recipient	Existing Land Uses	Planned Land Uses
City of Calistoga	Intensive and low-intensity agricultural uses, single-family residential uses with areas of limited multifamily residential uses, specialty retail uses, and parks and open space	Rural and low-density residential development and limited development of commercial uses
City of Napa	Rural, low-density, and medium-density residential uses; specialty retail uses and commercial and business uses; public and quasi-public uses; and recreational and open space uses	Infill within the Rural Urban Limit line and development of single-family residential uses; hotels and resorts; and commercial, office, and light manufacturing uses
Yuba City Water Service Area		
Yuba City	Low-density, medium-density, and high-density residential uses; commercial, business, and light industrial uses; public and quasi-public uses; and recreational and open space uses	Development of regionally oriented retail and commercial land uses, additional development of single-family and multifamily residential and light industrial uses within the current city limits, and substantial amounts of residential development proposed in the city's sphere of influence
Butte County Service Area		
Del Oro Water Company	Primarily rural residential and low-density residential uses with areas of commercial uses and recreational uses at the Lime Saddle Marina	Rural and low-density residential uses
Oroville District of California Water Service Company	Primarily single-family residential uses with areas of commercial uses	Conversion of single-family residential uses to multifamily residential uses and redevelopment of existing single-family residences
Note: SCWA = Solano County Water Agency. Source: Data compiled by AECOM in 2012		

3.10.2 DISCUSSION

a) Physically divide an established community?

The Proposed Project involves modifying SWP allocations to improve water delivery reliability and increase the volume of water that may be delivered to the Plaintiff Water Contractors. Because implementing the Proposed Project would involve using existing SWP water storage, conveyance, and delivery systems and no new facilities would be constructed, it would not physically divide an established community. **No impact** would occur.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Implementing the Proposed Project involves modifying SWP allocations to the four Plaintiff Water Contractors by establishing a new NOD SWP allocation and creating an Advanced Table A program to supplement the

existing Table A SWP water delivery schedule. This discussion identifies relevant goals, objectives, and policies from the adopted general plans of each of the SWP water recipients in the service areas of the four Plaintiff Water Contractors and addresses the relationship between the Proposed Project and existing adopted general plan goals, policies, and objectives. In addition, this section evaluates the consistency of the Proposed Project with adopted SWP water recipients' urban water master plans (UWMPs) and Butte County's integrated water resources plan (IWRP).

Evaluation of the Proposed Project's potential impacts on land use and planning was based on a review of the general plans for cities identified above in the SCWA, Napa, and Yuba City water service areas. No goals, objectives, or policies identified in the general plans for the cities of American Canyon, Suisun City, Vacaville, or Vallejo are applicable to the Proposed Project. Table 3.10-2 identifies goals, objectives, and policies from the general plans for the cities of Benicia, Dixon, Fairfield, Rio Vista, Calistoga, Napa, and Yuba City that are applicable to the Proposed Project.

Implementing the Advanced Table A program would provide SCWA, Napa, and Yuba City with a mechanism to obtain additional SWP water supplies during dry periods when Table A Allocations and other SWP water supplies are not sufficient to meet local demand. Implementing these modifications would improve SWP water delivery reliability and increase the volume of water that may be delivered to SCWA, Napa, and Yuba City. Therefore, implementing the Proposed Project would be consistent with the general plan goals, objectives, and policies identified in Table 3.10-2 related to providing adequate and reliable SWP water supplies to existing and future residents and businesses even during dry periods.

The Cities of Benicia, Fairfield, Rio Vista, Suisun City, Vacaville, and Vallejo in the SCWA service area; the Cities of American Canyon and Napa in the Napa service area; and Yuba City have prepared and adopted UWMPs. These UWMPs identify strategies for maintaining efficient use of urban water supplies, promote water conservation, ensure that sufficient SWP water supplies are available for future use, and provide a mechanism for response during drought water conditions. The improved SWP water delivery reliability and increased volume of SWP water that may be delivered to SCWA, Napa, and Yuba City under the Proposed Project would help provide an adequate SWP water supply is available to meet existing and future water demands for land uses identified in these UWMPs.

Implementing a new water allocation for Butte County includes adopting a special BC Table. Within Butte County service area, SWP water is subcontracted by the Del Oro Water Company, which serves Lime Saddle, Magalia, Paradise Pines, and Stirling Bluffs, and Cal Water, which serves approximately 75% of the City of Oroville. Table 3.10-3 provides goals and policies from the *Butte County General Plan 2030* (Butte County 2010b) and *Oroville 2030 General Plan* (City of Oroville 2009) that would be applicable to the Proposed Project. SWP water purchased by the Del Oro Water Company and Cal Water would be used to meet water demands in Butte County in their respective service areas and would help to ensure that adequate water supply is available to residents and businesses in Butte County. Therefore, implementing the Proposed Project would be consistent with the *Butte County General Plan* and *City of Oroville General Plan* goals and policies related to providing adequate and reliable water supplies to existing and future residents and businesses.

**Table 3.10-2
Applicable Goals, Objectives, and Policies from SWP Water Recipients' General Plans in the Service Areas of the Four Plaintiff SWP Water Contractors**

SWP Water Recipient	Applicable General Plan Goals, Objectives, and Policies
SCWA Service Area	
City of Benicia	<p>Goal 2.36: Ensure an adequate water supply for current and future residents and businesses.</p> <p>Policy 2.36.1: Approve development plans only when a dependable and adequate water supply to serve the development is assured.</p> <p>Policy 2.36.2: Continue to pursue and secure adequate water sources of the highest quality available.</p>
City of Dixon	<p>Policy 10: The City shall coordinate development activity with the water purveyors to ensure that adequate domestic, commercial/industrial and fire flow requirements are met.</p> <p>Policy 12: The City shall ensure that development does not exceed the capacity of the local water supply systems.</p> <p>Policy 14: The City shall link growth to the current and projected water supply.</p>
City of Fairfield	<p>Objective PF 4: Provide an adequate supply of quality water to support the General Plan level of development.</p> <p>Policy PF 4.1: The City shall condition approval of new development projects on the availability of adequate water supply and infrastructure to serve the new development.</p> <p>Policy PF 4.2: The City shall work with other urban water agencies to secure additional water supplies for new development so that the local affordable agricultural water supply is not reduced.</p> <p>Policy PF 4.3: The City shall acquire water supplies to serve all foreseeable needs in the General Plan with a minimum 90 percent reliability (e.g. water supplies may be deficient in no more than 10 percent of the years).</p>
City of Rio Vista	<p>Goal 12.5: To maintain a water system that adequately serves the existing community, to provide water services to all existing and future development, and to ensure that safe drinking water standards are met.</p> <p>Policy 12.5.A: The City shall provide reliable and secure water sources for current and future residents.</p>
Napa Water Service Area	
City of Calistoga	<p>Goal I-1: Provide adequate supplies of water, appropriate for the intended purpose, and available to all types of users.</p> <p>Policy P1: The City shall base water capacity and supply plans and projections on the “below normal year” but will also look for ways to decrease the impacts of a “dry year.”</p> <p>Policy P3: Potable water should generally be available to the City’s residents and businesses.</p>
City of Napa	<p>Goal CS-9: To ensure adequate, reliable, and safe water supplies to the community, even through drought periods of similar intensity as the 1986–1992 drought.</p> <p>Policy CS-9.2: The City shall acquire or develop additional water supplies that would be available during drought periods to offset the shortages anticipated from existing supplies. Water Supply options include:</p> <ol style="list-style-type: none"> a) Acceleration of Table A deliveries from the SWP through contract modification. b) Pursuing transfer agreements with other State Water Contractors pursuant to the provisions of the Monterey Agreement. c) Participation in SWP water banking program. d) Participation in the SWP Drought Year Projects such as the American Basin Conjunctive Use Project and the Supplemental Water Purchase Program.

Table 3.10-2 Applicable Goals, Objectives, and Policies from SWP Water Recipients' General Plans in the Service Areas of the Four Plaintiff SWP Water Contractors	
SWP Water Recipient	Applicable General Plan Goals, Objectives, and Policies
	Policy CS-9.3: The City of Napa shall determine the firm yield available from existing and future SWP water supply sources and shall monitor and, if necessary, limit growth (new water system hook-ups) in order to guarantee drought year water supplies to existing and proposed development.
Yuba City Water Service Area	
Yuba City	Policy 7.1-G-1: Ensure that an adequate supply of water is available to serve existing and future needs of the City.
Notes: SCWA = Solano County Water Agency; SWP = State Water Project. Sources: City of Benicia 1999, City of Calistoga 2003, City of Dixon 1993, City of Fairfield 2002, City of Napa 2010, City of Rio Vista 2001, City of Yuba City 2004	

Table 3.10-3 Applicable Goals and Policies within the Butte County SWP Contractor Service Area	
Land Management Authority	Applicable General Plan Goals and Policies
Butte County	Goal W-2: Ensure an abundant and sustainable water supply to support all uses in Butte County. Policy W-P2.4: The County's State Water Project allocation should be fully utilized within Butte County. Policy W-P2.8: The County supports Area of Origin water rights, the existing water right priority system and the authority to make water management decisions locally to meet the county's current and future needs, thereby protecting Butte County's communities, economy and environment.
City of Oroville	Goal PUB-6: Provide sufficient supplies of high quality water to City residents and businesses to serve the City in the most efficient and financially-sound manner. Policy P6.6: Ensure that all proposed developments can be adequately served by available water supplies. Policy P6.8: Condition new development on the availability of sufficient water supply, storage and pressure requirements for the City.
Note: SWP = State Water Project. Sources: Butte County 2010b, City of Oroville 2009	

The Del Oro Water Company and Cal Water have prepared and adopted UWMPs for their service areas. These UWMPs, like those mentioned previously, identify strategies for maintaining efficient use of urban water supplies, promote water conservation, ensure that sufficient water supplies are available for future use, and provide a mechanism for response during drought water conditions. The improved water delivery reliability and increased volume of water that may be delivered to the Del Oro Water Company and Cal Water under the Proposed Project would help to ensure that an adequate water supply is available to meet existing and future water demands for land uses identified in their UWMPs.

In May 2005, the Butte County Department of Water and Resource Conservation prepared an IWRP that identifies water management policies, programs, and projects that stakeholders have identified as important for

maintaining and enhancing agricultural, environmental, and urban water uses in the county into the future. The IWRP provides policy recommendations and options related to the county's SWP Table A allocation, including transferring water, on a short-term basis, for purchase by other SWP contractors; evaluating the uses of current allocations to develop estimates of the county's baseline needs in all water-year types, including a firm estimate of the minimum amount of water needed in dry years; and negotiating new contracts with Del Oro Water Company, Paradise Irrigation District, and Cal Water based on that evaluation (Butte County Department of Water and Resource Conservation 2005:4-3, 6-2). Implementing the Proposed Project would be consistent with the policy recommendations in the IWRP to improve water management of Butte County's SWP Table A allocation.

In addition, Butte County is implementing two multiyear transfer lease agreements with PWD and the Westside Districts. The environmental impacts of implementing these multiyear leases were analyzed in the PWD *Draft Initial Study and Proposed Negative Declaration for the Butte County–Palmdale Water District Multi-Year State Water Project Table-A Water Transfer* (Palmdale Water District 2012 [State Clearinghouse No. 201205106]) and *Draft Initial Study and Proposed Negative Declaration for the Butte County–Westside Districts Multi-Year State Water Project Table A Water Transfer* (Dudley Ridge Water District 2012 [State Clearinghouse No. 2012051063]). The PWD IS/ND concluded that the multiyear transfer of the Butte County SWP Table A allocation to PWD would be consistent with the goals, objectives, and policies presented in the City of Palmdale and Los Angeles County General Plans and PWD's 2010 UWMP (Palmdale Water District 2012:32). In addition, the Westside Districts' IS/ND concluded that the transfer of a portion of the SWP Table A allocation from Butte County to improve the Westside Districts' water supply reliability and to help meet its anticipated agricultural water demands for existing farmed acreage would be consistent with the goals, objectives, and policies presented in the Kern County and Kings County General Plans (Dudley Ridge Water District 2012:35).

In summary, implementing the Proposed Project would not conflict with the general plan goals, objectives, and policies identified in Tables 3.10-2 and 3.10-3 and would be consistent with the SWP water recipients' adopted UWMPs and the Butte County Department of Water and Resource Conservation IWRP. **No impact** would occur.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

As stated in Section 3.4, "Biological Resources," none of the service areas of the Plaintiff Water Contractors are covered by an adopted HCP or NCCP. **No impact** would occur.

3.11 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Mineral Resources. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.11.1 ENVIRONMENTAL SETTING

Existing resources in the project area include mineral, oil and gas, and geothermal resources. Mineral resources, distributed throughout the project area, consist primarily of construction aggregate, which is composed predominantly of sand, gravel, soil for construction projects, and crushed stone (California Department of Conservation 2009). Substantial natural gas resources with active production include the Rio Vista Gas Field, located in the SCWA water service area. Active natural gas production also occurs in Butte County. ~~Both Oil and natural gas production occurs in the service areas of the Westside Districts and service area PWD, in Kern and Kings Counties.~~ PWD encompasses a 140-square-mile area scattered through the southern Antelope Valley, located almost entirely within the City of Palmdale city limits extending into unincorporated areas of Los Angeles County that are within the City’s sphere of influence. Geothermal resources with active production for commercial low-temperature use include the Calistoga geothermal field in the Napa water service area. No substantial oil, gas, or geothermal resources exist in the Yuba City water service area (California Department of Conservation 2001).

3.11.2 DISCUSSION

- a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. No new construction or physical alteration of existing SWP facilities would occur. Changes in SWP operations would not affect existing mineral, oil and gas, or geothermal production. Therefore, implementing the Proposed Project would not result in the loss of mineral, oil and gas, or geothermal resources. **No impact** would occur.

- b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?**

As stated previously, implementing the Proposed Project would not result in the loss of mineral, oil and gas, or geothermal resources; therefore, **no impact** would occur.

3.12 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Noise. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.12.1 ENVIRONMENTAL SETTING

The SWP includes 34 storage facilities, reservoirs, and lakes; 20 pumping plants; four pumping-generating plants; five hydroelectric power plants; and approximately 700 miles of open canals and pipelines. Noise sources associated with SWP facilities include pumping plants, lift stations, and other conveyance facilities during operations. Noise-sensitive land uses with sensitive receptors include residences, schools, hospitals, libraries, and certain types of recreational uses, including those available at Lake Oroville and San Luis Reservoir SRAs.

3.12.2 DISCUSSION

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?

Because no construction or physical alteration of existing SWP facilities would occur under the Proposed Project, no new noise or vibration sources would be introduced as part of the project. Implementing the Proposed Project would result in increases in the volume of water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. Such changes in operations might change the duration and

pattern of existing noise in the project area. Because the maximum annual allocation for each contractor would not change, any fluctuations in noise associated with implementing the Proposed Project would be within the range of variability associated with existing SWP operations in different water-year types. Therefore, any changes in noise levels associated with the Proposed Project would be **less than significant**.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Because no construction or physical alteration of existing SWP facilities would occur under the Proposed Project, no new noise or vibration sources would be introduced by the Proposed Project. Implementing the Proposed Project would result in increases in the volume of water delivered to the four Plaintiff Water Contractors and an associated minor change to existing SWP and local facility operations, including the duration and pattern of noise of pumping and water conveyance facilities. Changes in groundborne vibration and groundborne noise levels associated with SWP and local facility operations would be within the range of variability associated with existing facility operations and therefore would be **less than significant**.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

As described previously, because implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP and local facility operations. Noise emissions associated with changes in facility operations would be within the range of noise variability associated with existing SWP operations and would not be a substantial increase. Therefore, **no impact** would occur.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Because no construction or physical alteration of existing SWP facilities would occur under the Proposed Project, no new noise sources would be introduced by the Proposed Project. Implementing the Proposed Project would result in increases in the volume of water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP and local facility operations; however, noise emissions associated with changes to facility operations would be within the range of variability associated with existing SWP and local facility operations and would not be a substantial increase. Therefore, **no impact** would occur.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The Proposed Project involves implementing a new SWP water allocation to the four Plaintiff Water Contractors; it does not involve making changes to land use. Therefore, implementing the project would not expose people residing or working in the project area to excessive noise levels associated with a public airport or public use airport. **No impact** would occur.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The Proposed Project involves implementing a new water allocation to the four Plaintiff Water Contractors; it does not involve making changes to land use. Therefore, implementing the project would not expose people residing or working in the project area to excessive noise levels associated with a private airstrip. **No impact** would occur.

3.13 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. Population and Housing. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.13.1 ENVIRONMENTAL SETTING

In the SCWA service area, 2010 population data for the Cities of Benicia, Dixon, Fairfield, Rio Vista, Suisun City, and Vallejo were obtained from the California Department of Finance, and future 2035 population projections were based on the Association of Bay Area Governments 2009 population forecasts for Solano County. The 2010 population data and future 2035 population projection for the City of Vacaville were obtained from the *City of Vacaville 2010 Urban Water Management Plan* and provide the most recent population data and population projections based on existing and future development in the city.

In the Napa service area, the 2010 population data for the City of Calistoga and the Town of Yountville were obtained from the California Department of Finance, and future 2035 population projections were based on Association of Bay Area Governments 2009 population forecasts for Napa County. The 2010 population data and future 2035 population projections for the cities of American Canyon and Napa were obtained from the City of American Canyon 2010 UWMP and City of Napa 2010 UWMP, respectively. These UWMPs provide the most recent population data and population projections based on existing and future development in the City of American Canyon and in the City of Napa and within its rural urban line limits.

The Yuba City service area encompasses Yuba City. The 2010 population data and future 2035 population projections were obtained from the Yuba City 2010 UWMP. The 2010 population data included population in the city limits and in its sphere of influence, and the 2035 population projections include anticipated development in the city limits and its sphere of influence identified in the 2004 Yuba City General Plan, as well as planned development identified since adoption of the city’s general plan.

Population projections for the Butte County service area were obtained from Del Oro Water Company WMP and the 2010 UWMP for the Oroville District of Cal Water. The 2010 population data include population in the Del Oro Water Company and Cal Water service areas, and the 2035 population projections were based on anticipated development of land uses identified in their UWMPs through 2035.

Table 3.13-1 presents 2010 and projected 3035 population data and the estimated percent increase in population over the 25-year period for the SWP water recipients in the four service areas of the Plaintiff Water Contractors.

Table 3.13-1 Population of the Service Areas of the Four Plaintiff Water Contractors			
Plaintiff Water Contractor	2010	2035	Percent Increase
Butte County Service Area			
California Water Service Company—Oroville District	9,920	10,400	4.6
Del Oro Water Company	14,000	17,500	20.0
Napa Service Area			
City of American Canyon	19,530	30,400	35.8
City of Calistoga	5,150	5,400	4.6
City of Napa	86,740	93,550	7.3
SCWA Service Area¹			
City of Benicia	27,000	30,200	10.6
City of Fairfield	105,300	129,400	18.6
City of Suisun City	28,100	35,000	19.7
City of Vacaville	97,300	111,100	12.4
City of Vallejo	115,950	143,200	19.0
Yuba City Service Area			
Yuba City	65,300	135,000	51.6
Notes: SCWA = Solano County Water Agency. ¹ Only areas served by SWP supplies are listed. Sources: ABAG 2009; Cal Water 2011; City of Yuba City 2011; City of Napa 2011; Del Oro Water Company, Paradise Pines District 2000; DOF 2010; City of Vacaville 2011; City of American Canyon 2011			

Local governments are mandated to prepare and adopt a general plans to guide and oversee development and growth per Section 65302(a) of the California Government Code. These general plans govern the local government’s land use decisions. As discretionary actions, these plans are also subject to the requirements of CEQA and must undergo an environmental impact analysis to identify significant adverse environmental effects associated with their implementation.

The following discussion describes the findings and conclusions of the respective CEQA document addressing planned land development within the service area of each Plaintiff Water Contractor.

BUTTE COUNTY

Growth and land use within the municipal areas within Butte County are also governed by other local plans, policies and regulations. For instance, the general plans of the Cities of Biggs, Chico, Gridley, Oroville, and Paradise (City Plans) have previously identified growth planned for the area.

The Butte County General Plan EIR concluded that Cal Water will not have water to support new growth. However, Butte County found this to be a less-than-significant impact under CEQA. Butte County General Plan Policy W-P2.4 is to support SWP allocation to be fully utilized within Butte County. Policy W-P2.8 is Butte County's policy to support the area of origin water rights priority system and the authority to make water management decisions locally to meet the county's future and current needs.

Planned development, as discussed in the *Butte County General Plan 2030*, assumes the maximum development projections for the year 2030 for the lands located within unincorporated Butte County. The *Butte County General Plan 2030* also provides that should approved development approach the maximum number of residential units and nonresidential square feet projected within the general plan EIR, Butte County has committed itself to prepare and adopt an update to the general plan, including environmental review before subsequent development projects, to address growth impacts that would occur as a result of development exceeding the projections presented in the general plan EIR.

Planned development, as discussed in the City Plans, includes the conversion of agricultural and open space lands to implement development, including specific plans for residential, commercial, and office space, and industrial growth within the sphere of influence of the cities.

Other regional and local plans, policies, and regulations influence land use development. For example, the City of Oroville also utilizes certain plans as a guide to development and annexation within specific areas of Oroville. For instance, the City of Oroville relies on the Oro Bay Specific Plan to address land use in the 2,400-unit Oro Bay development project west of the Oroville Municipal Airport. The Riverfront Master Plan was developed to coordinate improvements around the Feather River waterfront north of Historic Downtown. The Rio d'Oro Specific Plan addresses land use in the 2,700-unit Rio d'Oro development project in the southern portion of the Planning Area west of SR 70. The City of Oroville also relies on a number of policies addressing the City's Economic Development Zones.

The EIRs for the Butte County General Plans concluded that continued development consistent with the respective general plans would result in significant unavoidable impacts (after mitigation is implemented). Those EIRs identified significant unavoidable impacts on agricultural uses, biological resources, need for additional water supplies, noise, air quality, traffic public services and utilities, and climate change (Butte County 2010; City of Oroville 2009; Town of Paradise 1994).

SOLANO COUNTY WATER AGENCY

SCWA is located within Solano County. Growth and land use in the SCWA service area are governed by the general plans for Solano County and the Cities of Fairfield, Vallejo, Vacaville, and Suisun City (Solano General Plans). The Solano General Plans have previously identified the growth planned for the area.

Other regional and local plans, policies, and regulations influence land use development. For example, in the SCWA service area, the Suisun Marsh is protected under the adopted Suisun Marsh Protection Plan, which identifies objectives for managing existing land uses in water areas in the Suisun Marsh. The City of Fairfield has established an urban limit line under its general plan to limit outward growth to protect the Suisun Marsh, and policies and programs in the City of Suisun City General Plan are intended to ensure that future land uses are consistent with the Suisun Marsh Protection Plan. In addition, the Cities of Vacaville and Fairfield have adopted

policies to create the Vacaville-Fairfield-Solano Greenbelt between the two cities, which functions as an ultimate limit for urban growth. The regulatory requirements of the airport land use commission and any applicable airport land use compatibility plans, all of which are designed to avoid land use compatibility and hazards issues related to land use changes near airports, further guide development in the SCWA service area.

The EIRs for the Solano General Plans concluded that removing an obstacle to growth by supplying water would allow continued development to occur that was identified within the Solano General Plans. It was further identified that that growth, in turn, would result in significant unavoidable impacts (after mitigation is implemented). Those EIRs identified significant unavoidable impacts on agricultural uses, biological resources, traffic and circulation, air quality, noise, land use, and visual and aesthetic resources (Solano County 2008; City of Fairfield 2001; City of Vacaville, 1990).

NAPA

The Napa service area is located within Napa County. Growth and land use in the Napa service area is governed by the general plans for Napa County and the Cities of Napa, American Canyon, and Calistoga (Napa General Plans). The Napa General Plans have previously identified the growth planned for the area.

Planned development, as discussed in the Napa General Plans, includes policies and goals for residential commercial and industrial growth in Napa County. Other regional and local plans, policies, and regulations influence land use development. For example, Napa County adopted Measure J to protect county land designated as agricultural or agricultural resource, watershed, or open space unless a majority votes in favor of allowing higher densities. Measure J stipulates that new growth must be accommodated within the urban limit lines of existing communities (City of Calistoga 2003:LU-36). The City of Calistoga has also adopted a growth management system that applies to all development in the city. This system is intended to ensure that development is coordinated and does not compromise the objective of a small-town character (City of Calistoga 2012).

The regulatory requirements of the airport land use commission and any applicable airport land use compatibility plans, all of which are designed to avoid land use compatibility and hazards issues related to land use changes near airports, further guide development in the Napa service area.

The EIRs for the Napa General Plans concluded that continued development consistent with the respective general plans would result in significant unavoidable impacts (after mitigation is implemented). Those EIRs identified significant unavoidable impacts on agricultural uses, biological resources, traffic and circulation, air quality, GHG emissions, and noise.

YUBA CITY

The growth and land use within the Yuba City service area is governed by the City of Yuba City's general plan. The general plan has previously identified the growth planned for the area, including residential expansion in new growth areas into neighborhoods containing a mix of uses and housing types. The policies in the general plan also promote integration of new neighborhoods with existing urban development.

Other regional and local plans, policies, and regulations influence land use development. For instance, the Central City Specific Plan is used as an implementation tool to, among other things, enhance downtown Yuba City and

create new uses in the Town Center development. The Harter Specific Plan is used as an implementation tool to provide an additional employment and retail center on the former Harter Packing Company property and create a business park and commercial development opportunities. Additionally, the City of Yuba City General Plan discusses using a developer's master plan or a city-initiated specific plan to create two new Regional Activity Centers.

The Yuba City General Plan EIR concluded that continued development consistent with the City's general plan would result in significant unavoidable impacts (after mitigation is implemented). This EIR identified significant unavoidable impacts on agricultural uses resulting conversion to urban and commercial land uses (City of Yuba City 2004, cited in Reclamation and City of Yuba City 2009).

3.13.2 DISCUSSION

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The growth-inducing potential of a project would be considered to have a significant impact if the project either would induce unplanned growth or would create the capacity for growth to occur above and beyond the levels identified in local general plans.

Implementing the Proposed Project would result in modifying SWP allocations to the four Plaintiff Water Contractors by establishing a new NOD SWP allocation and by creating an Advanced Table A program to supplement the existing Table A SWP water delivery schedule. The Proposed Project would not directly induce growth not already planned by the Plaintiff Water Contractors. Water provided through implementation of the settlement agreements could remove an obstacle to future growth; however, such growth and development would be subject to future environmental impact analysis by each Plaintiff Water Contractor at the time such development is proposed. Because implementing the Proposed Project would not involve constructing new homes or businesses or extending roadways or other infrastructure, it would not directly induce population growth. **No direct impact** would occur.

Implementing the Proposed Project would not provide new SWP water supplies beyond the Maximum Table A Amounts for each of the four Plaintiff Water Contractors. Rather, it would increase SWP water supply reliability by providing additional water in drier years and might reduce the need for water supplies from other sources, such as groundwater, other surface water sources, or transfer agreements from other water districts.

As shown in Table 2-2 and Exhibits 2-8 through 2-11 in Chapter 2, "Project Description," implementing the new NOD water allocation would increase the reliability of water deliveries to the Plaintiff Water Contractors during all water-year types. The volume of water delivered to these water contracting agencies would increase by approximately 20–22% in wetter years, 36–47% in above- and below-normal years, and 66–138% in drier years. More importantly, implementing the Proposed Project would increase SWP water deliveries to these service areas by about 36–47% during periods when the areas receive below-normal water supplies. This increase would result in a more secure water supply by improving SWP water supply reliability for each Plaintiff Water Contractor. With the implementation of the Proposed Project, the overall increase in volume of water delivered would be relatively low.

Improvement of the SWP water delivery reliability and increase in volume of SWP water would not directly induce growth not already planned by the Plaintiff Water Contractors. Water provided through implementation of the settlement agreements could remove an obstacle to future growth; however, such growth and development would be subject to future environmental impact analysis by each Plaintiff Water Contractor at the time such development is proposed.

Because the Proposed Project would not increase the Plaintiff Water Contractors' Table A Amount, and because improving water supply reliability would not induce growth not already planned by land management authorities served by the Plaintiff Water Contractors, **no indirect impact** would occur.

b) Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?

The Proposed Project involves modifying SWP allocations to improve SWP water delivery reliability and increase the volume of SWP water that may be delivered to the Plaintiff Water Contractors. Because implementing the Proposed Project would involve using existing SWP water storage, conveyance, and delivery systems and no new facilities would be constructed, implementing the Proposed Project would not displace existing housing or necessitate the construction of replacement housing elsewhere. **No impact** would occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The Proposed Project involves modifying SWP allocations to improve SWP water delivery reliability and increase the volume of SWP water that may be delivered to the Plaintiff Water Contractors. These changes in operations would result in minor changes in SOD water deliveries for both agricultural and municipal uses. During above-normal and below-normal years, there would be a minor reduction in SOD water deliveries (see Table 2-15 in Chapter 2, "Project Description"). As shown in Table 2-15, SOD water deliveries could be reduced by up to 28 TAF per year. This reduction would equal approximately 1.26% of the SWP SOD Table A water deliveries.

As discussed in Section 3.2, "Agriculture and Forestry Resources," six SWP contractors use SWP water for agricultural purposes: Dudley Ridge Water District, Empire West Side Irrigation District, Kern County Water Agency, Kings County, Oak Flat Water District, and Tulare Lake Basin Water Storage District. Although implementing the Proposed Project would result in a reduction of agricultural water availability, this reduction would occur only in above-normal or below-normal water years. Furthermore, when compared to the total number of acres of farmland in the region, these temporary reductions are considered too small to constitute an effect substantial enough to lead to the indirect displacement of populations working in agricultural operations (see Tables 3.2-3 and 3.2-4 in Section 3.2, "Agriculture and Forestry Resources"). In addition, it is likely that the SOD agricultural water users would continue agricultural operations by changing crop patterns and crop types and/or procuring water from other sources. Therefore, changes in water supplies to these six SOD contractors would not result in the displacement of substantial numbers of people.

As discussed in Section 3.17, "Utilities and Service Systems," although implementing the Proposed Project would result in decreases in the availability of water during above- and below-normal years, the reduction would be temporary and offset by increased water conservation measures and/or the procurement of water from other

sources, which are typical management practices performed by water contractors during dry or critically dry water years. Of the SOD contractors, MWD would be the most affected.

Based on information presented in the MWD *Integrated Water Resources Management Plan 2010 Update* (MWD 2010), minor reductions in SWP water deliveries to MWD in above-normal or below-normal water years could be offset by other water sources or other water management practices, including conservation; water supplies from the Colorado River Aqueduct; Central Valley groundwater banking and transfers; surface water stored in local reservoirs; regional groundwater and conjunctive use storage programs; other local water supplies from the Los Angeles Aqueduct, groundwater from member-agency groundwater basins, and surface water diversions from member-agency water entitlements (MWD 2010:1-6). Therefore, these temporary reductions in SWP municipal water deliveries to SOD contractors would not result in the displacement of substantial numbers of people. **No impact** would occur.

3.14 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.14.1 ENVIRONMENTAL SETTING

Public services in the project area include fire and police protection services; schools; health-care facilities; parks; and other public facilities, such as libraries. New construction or changes in population could create a disruption in public services or increase the need for new or expanded services.

3.14.2 DISCUSSION

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:**

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These minor changes in operations would not require any additional workers, new construction, or physical alteration of existing facilities. Implementing the Proposed Project also would not result in an increase in population that would, in turn, increase demand for new or expanded levels of service. Therefore, **no impact** would occur. Growth-inducing impacts associated with implementing the Proposed Project are discussed in Section 3.13, “Population and Housing.” Impacts associated with recreation and associated recreation facilities are discussed in Section 3.15, “Recreation.”

3.15 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Recreation. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Cause a direct or indirect substantial physical degradation of either public recreation or recreational facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.15.1 ENVIRONMENTAL SETTING

The SWP water storage facilities support a variety of recreational opportunities, including boating, swimming, fishing, hiking, and camping. Many waterways used for SWP water conveyance also provide opportunities for many water-based recreational uses. The two major water storage facilities of the SWP are Lake Oroville and San Luis Reservoir.

LAKE OROVILLE

Recreation facilities are located throughout the Lake Oroville Complex, which comprises Lake Oroville, Thermalito Diversion Pool, Thermalito Forebay, Thermalito Afterbay, and the Oroville Wildlife Area. The Thermalito Forebay and Afterbay are offstream regulating reservoirs situated downstream of Lake Oroville. The Thermalito facilities experience little water surface fluctuation. Thermalito Afterbay is situated within the Oroville Wildlife Area, which offers wildlife viewing and opportunities for hunting, camping, and water recreation. Facilities at the Oroville Wildlife Area include a shooting range, boat ramp, and campgrounds with restroom facilities.

Lake Oroville SRA, which includes and surrounds Lake Oroville, is managed by the California Department of Parks and Recreation. It has two full-service marinas, five major and several smaller car-top boat launch ramps, three family campgrounds and several boat-in camps, and 10 floating campsites (State Parks 2008). The facilities at Lake Oroville SRA support a wide variety of recreational uses, including powered and nonpowered boating, warm water and cold-water fishing, developed and primitive camping, picnicking, swimming, horseback riding, hiking, and mountain biking.

Boating

When full, Lake Oroville provides approximately 15,500 acres of water surface at an elevation of 900 feet msl. When the reservoir is drawn down more than 100 feet (pool elevation of 800 feet msl), the surface area of the

reservoir is reduced, and the area for boating and similar water-based activities is constrained. Drawdown affects the number of boat ramps and launch lanes available to boaters and the ease of use of the facilities. Both the number of ramps and the number of launch lanes available decrease with decreasing pool levels, with the major developed launch ramps narrowing in stages and each closing due to low water at different elevations. When pool elevations fall below 800 feet msl, one ramp is closed and at least 16 of the 33 total launch lanes become unusable.

When the reservoir is drawn down more than 150 feet (pool elevation of 750 feet msl), shoreline use is substantially constrained because of steep slopes and the increased distance to parking and services. Swimming beaches are closed when the lake elevation drops to 819 feet msl (Reclamation and FRWA 2003:6-16), and all boat ramps are closed when the reservoir is drawn down more than 225 feet (pool elevation of 675 feet msl).

Angling

Effects of project operations on reservoir boating, as discussed above, also apply to angling in that most angling in the area (with the exception of angling on the Feather River) occurs from boats. Therefore, drawdown has effects on fishing at Lake Oroville to the extent that boater access is affected. However, angling activity at Lake Oroville, including major fishing tournaments, peaks during fall and spring and usually does not appear to be greatly affected by the typically low off-season pool levels. The typically reduced number of launch lanes available during those seasons has generally not been a major impediment to these events, except during the most extreme low-water conditions. As an example, a fishing tournament was held at the Bidwell Canyon boat ramp when the reservoir pool elevation was below 700 feet msl. Although conflicts may occur if few launch lanes are usable, relatively few recreational boaters use the launch facilities during the nonsummer months, reducing competition for use of the ramps and potential conflicts.

Effects of drawdown on bank fishing may be greater, in that low water levels make the shoreline less accessible in most areas. However, at a few locations on Lake Oroville, a moderate degree of drawdown leads to more exposed and accessible shoreline for a bank fishing that at high water levels is not available or is difficult to reach.

Shoreline Use and Swimming

Lake Oroville has one developed swim area at Loafer Creek, but much of the swimming activity is more informal in nature. Swimming activity often occurs at the same locations and in conjunction with other shoreline-based day use activities such as picnicking, sunbathing or relaxing in the shade, and bank fishing.

Several other small day use facilities without swim beaches exist at Lake Oroville, generally in association with boat ramps, and each with picnic tables, grills, and shade structures or trees. Lake Oroville visitors also use the car-top boat ramp areas as informal swimming and day use areas. Several of these become more usable by swimmers, picnickers, anglers, and others as reservoir level decreases, exposing more usable shoreline. Shoreline use by swimmers, anglers, and others becomes more difficult and less enjoyable as the pool level decreases due to the primarily steep and muddy shorelines in most areas. A moderate level of drawdown has beneficial effects at the Stringtown Car-top Boat Ramp, because it provides areas of shoreline for parking and recreation use, whereas very little shoreline is accessible or usable at reservoir elevations near full pool.

Camping

With the exception of boat-in camping, most camping is not directly affected by reservoir drawdown. Only the Bidwell Canyon Campground provides sites close to the shoreline. Shoreline use in that area becomes difficult or undesirable because of steep and muddy conditions as the pool elevation falls more than about 50 feet below full pool (850 feet msl). Campers at the Lime Saddle and Loafer Creek Campgrounds may hike to the shoreline near the campgrounds, and would also find the shoreline areas increasingly less favorable for use as the pool level falls.

Regarding boat-in camping, at moderate and low water levels the campsites can be a substantial distance from the water. Routes from the shoreline to the campsites through the fluctuation zone become lengthy and steep, making these campsites less attractive. Therefore, boat-in campgrounds are generally more popular when the reservoir level is high and become generally unused as the reservoir level drops more than 50–70 feet below full pool (830–850 feet msl).

The aesthetic experience of floating campsite users can be negatively affected by drawdown because of the exposed shoreline that becomes a dominant aspect of the visual setting. Access to the floating campsites is not usually affected by drawdown during the majority of the recreation season. (Other aesthetic effects of reservoir drawdown that may affect the enjoyment of visitors to Lake Oroville are discussed in Section 3.1, “Aesthetics.”)

Trails

Access to trails or trailheads is not generally affected by reservoir drawdown; however, some trail users would like to have more trails that provide access to the water, which currently is only provided by a few trails when the reservoir is at or near full pool. Additional access may be difficult or infeasible because of changing water levels. Additionally, the aesthetic effect of drawdown can affect the recreational setting for trail users using shoreline trails, and therefore can affect the recreational trails experience.

SAN LUIS RESERVOIR

Recreation facilities are located throughout the San Luis Reservoir SRA, which comprises San Luis Reservoir, O’Neil Forebay, and Los Banos Creek Reservoir. The San Luis Reservoir SRA is managed by the California Department of Parks and Recreation and supports a variety of recreation opportunities including camping, picnicking, wildlife viewing, hiking, fishing, hunting, windsurfing, driving, swimming, and boating. Recreation sites provide boat launches, day-use areas, and campgrounds (State Parks 2011). Upper and Lower Cottonwood Wildlife Areas, Pacheco State Park, and an off-highway vehicle use area adjoining the San Luis SRA also provide additional recreation opportunities for fishing, boating, hunting, off-highway vehicle use, and wildlife viewing,

Boating

When full, San Luis Reservoir provides a surface area of 12,700 acres and 65 miles of shoreline at the maximum pool elevation of 544 feet msl. The low-point elevation of the water surface is 369 feet msl, at which point water deliveries to coastal areas is restricted. The minimum-pool water surface elevation is 326 feet msl. As described above, the drawdown to the water surface’s low-point and/or minimum-pool reservoir elevations affects the number of boat ramps and launch lanes available to boaters and the ease of use of the facilities. Use of the Basalt area boat ramp becomes inconvenient and limited at approximately 340 feet msl. The boat ramp at Dinosaur Point can be used at the minimum reservoir pool but is difficult to access below 360 feet msl. No designated swimming

beaches are affected by water level fluctuations. Changes in SWP operations would not affect reservoir levels in Los Banos Creek, because water is received from flood control operations.

Angling

Effects of project operations on reservoir boating, as discussed previously for Lake Oroville, also apply to San Luis Reservoir. Drawdown of the water surface can limit fishing at San Luis Reservoir to the extent that fishing by boat and boater access is affected. Bass fishing derbies are held at all three water reservoirs at the San Luis SRA. Los Banos Creek Reservoir is stocked with trout by CDFW. Drawdown can result in low water levels that could make portions of shoreline less accessible during certain times of the year. Fishing activities on Los Banos Creek Reservoir would not be affected by drawdown activities.

Windsurfing

Windsurfing areas are located at the San Luis Creek and Medeiros Day Use Areas on San Luis Reservoir. Changes in project operations could have effects on windsurfing activities to the extent that the available reservoir surface area would be affected. Drawdown would reduce the surface area accessible for windsurfing activities.

Shoreline Use and Swimming

As at Lake Oroville, swimming is a popular activity during summer months at San Luis Reservoir. North Beach is the only designated swim area within San Luis Reservoir SRA; however, swimming activity often occurs at other locations and in conjunction with other shoreline-based day use activities such as picnicking and shore fishing. In general, shoreline use by swimmers, anglers, and others becomes more difficult and less enjoyable as the pool level decreases because of steep and muddy shorelines that are common in exposed areas.

Camping

San Luis Reservoir SRA has four campgrounds: Basalt, San Luis Creek, Medeiros, and Los Banos Creek. All campgrounds are open year round. Basalt Campground is the only campground near San Luis Reservoir. It has 79 developed family campsites each equipped with a fire ring and table, with nearby water faucets, restroom facilities, and a dump station. At O'Neill Forebay, the Medeiros Campground offers primitive campsites that are located along the southern shoreline. All boats must be removed from the forebay by sunset. The Los Banos Creek Campground provides primitive camping/day-use sites along the shore of Los Banos Creek Reservoir. Boaters are allowed to beach their boats. Los Banos Creek is subject to winter and/or road closures because of water releases from the reservoir.

Trails

Existing hiking trails at San Luis Reservoir include those found in the San Luis and O'Neill Forebay Wildlife Areas and San Luis Creek Use Area. A 5-mile disabled persons-accessible walking trail follows the O'Neill Forebay shoreline and connects to the campground to the North Beach day-use area at San Luis Reservoir. San Luis Creek Use Area also offers a 1.5-mile disabled persons-accessible trail. From February to April, the California Department of Parks and Recreation leads a "Path of the Padres" hike. The hike begins and returns to the Los Banos Creek Reservoir boat launch ramp. In general, access to and use of trails is not generally affected

by reservoir operations; the aesthetic effect of drawdown can affect the recreational setting for trail users using shoreline trails, and therefore can affect the recreational trails experience.

3.15.2 DISCUSSION

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These changes in operations would not involve any additional workers or the physical alteration of existing facilities. Because implementing the Proposed Project would not result in any population increase and would not involve modifications to parks or other recreational facilities that might lead to increased use of these facilities, **no impact** would occur.

b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

As described previously, implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These minor changes in operations would not involve new construction or physical alteration of existing facilities. **No impact** would occur.

c) Cause a direct or indirect substantial physical degradation of either public recreation or recreational facilities?

DWR has tailored this checklist to analyze whether implementing the Proposed Project may cause a direct or indirect substantial degradation of the public recreation or facilities at Lake Oroville or San Luis Reservoir as follows.

LAKE OROVILLE

As stated in Chapter 2, “Project Description,” the average volume of water stored in Lake Oroville would be reduced about 0.1 TAF. Changes in water surface elevations in Lake Oroville would decrease up to 0.4 foot. During most water-year types, the decrease in water surface elevation would be less than 1 foot (Table 2-7).

At Lake Oroville, changes in reservoir operations would result in a decrease in water surface elevations. In wet and normal water years, the change would be minimal and would not substantially affect recreational uses on the lake or shoreline. The decrease in water surface elevation would equal a change that would occur in less than 1 day under existing operations. This change in water surface elevation would not preclude or substantially interfere with recreational activities on the water or shoreline. The impact of this change would be **less than significant**.

Under existing conditions during July through February in dry water years and all months in critical water years, average reservoir water elevations drop below 800 feet, resulting in limitations on recreation boat ramp facilities and closing boat-in camping and swimming beaches. During August, September, and December in dry water years and June through February in critical water years, surface elevations can drop below 750 feet, constraining

shoreline uses. During June through December in critical water years, water surface elevations can drop below 675 feet, rendering all boat ramps inaccessible. Implementation of the Proposed Project would result in additional drawdown and subsequent decreases in water reservoir elevations of about -0.4 foot during certain summer month in dry and critical water years. Although the Proposed Project would result in additional decreases in water elevations, the Proposed Project would not substantially increase the existing constraints on operation or allowed uses of recreational facilities. The impact of this change would be **less than significant**.

SAN LUIS RESERVOIR

As stated in Chapter 2, “Project Description,” on average, the volume of water stored in San Luis Reservoir would not change when compared to existing conditions. **No impact** would occur.

3.16 TRANSPORTATION/TRAFFIC

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Transportation/Traffic. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.16.1 ENVIRONMENTAL SETTING

The regional roadway network in the project area includes roads ranging from freeways and highways to local, agricultural, and levee maintenance access roads.

3.16.2 DISCUSSION

- a) **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These changes in

operations would not require additional workers, new construction, or the physical alteration of existing SWP facilities. Because there would be no change in the number of workers and no construction—and therefore no changes in traffic—with project implementation, no conflicts with transportation plans, ordinances, or policies would occur. Therefore, **no impact** would occur.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

As described previously, implementing the Proposed Project would not result in a change in traffic on designated roads or highways. Therefore, the Proposed Project would not conflict with an applicable congestion management program or other congestion management standards. **No impact** would occur.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Implementing the Proposed Project would result in altering the SWP allocation to the four Plaintiff Water Contractors and would have no effect on air traffic patterns or air traffic levels. **No impact** would occur.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Implementing the Proposed Project would result in altering the SWP allocation to the four Plaintiff Water Contractors and would not introduce increased transportation hazards or incompatible uses. Therefore, **no impact** would occur.

e) Result in inadequate emergency access?

Because implementing the Proposed Project would not require any construction or physical alteration of existing SWP facilities, it would have no effect on emergency access. Therefore, **no impact** would occur.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

As noted previously, no conflicts with transportation plans or policies would occur with implementation of the Proposed Project. Therefore, **no impact** would occur.

3.17 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Utilities and Service Systems. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.17.1 ENVIRONMENTAL SETTING

The SWP is a water storage and delivery system of reservoirs, aqueducts, power plants and pumping plants. Its main purpose is to store SWP water and distribute it to 29 urban and agricultural water suppliers in northern California, the San Francisco Bay Area, the San Joaquin Valley, the central coast, and southern California. The SWP includes 34 storage facilities, reservoirs and lakes; 20 pumping plants; four pumping-generating plants; five hydroelectric power plants; and approximately 700 miles of open canals and pipelines. All SWP facilities are owned and operated by DWR for the benefit of the SWP contractors.

Table 3.17-1 presents the annual Maximum Table A Amounts and percent allocations for each of the 29 water contractors. In 2012, all 29 water contractors requested 100% of their Table A Allocation.

**Table 3.17-1
Maximum Annual SWP Table A Amounts for SWP Contractors**

Contractor	Water Use	Maximum Table A Amounts (acre-feet)	Percent of Total Table A Amount
Upper Feather River Area Contractors			
Butte County	M&I	27,500	0.66%
Yuba City	M&I	9,600	0.23%
Plumas County Flood Control and Water Conservation District	M&I	2,700	0.06%
North Bay Area Contractors			
Napa County Flood Control and Water Conservation District	M&I	29,025	0.70%
Solano County Water Agency	M&I	47,756	1.14%
South Bay Area Contractors			
Alameda County Flood Control and Water Conservation District, Zone 7	M&I	80,619	1.93%
Alameda County Water District	M&I	42,000	1.01%
Santa Clara Valley Water District	M&I	100,000	2.40%
San Joaquin Valley Area Contractors			
Dudley Ridge Water District	Agriculture	57,343	1.37%
Empire West Side Irrigation District	Agriculture	3,000	0.07%
Kern County Water Agency	Agriculture	998,730	23.93%
Kings County	Agriculture	9,305	0.22%
Oak Flat Water District	Agriculture	5,700	0.14%
Tulare Lake Basin Water Storage District	Agriculture	95,922	2.30%
Central Coastal Area Contractors			
San Luis Obispo County Flood Control and Water Conservation District	M&I	25,000	0.60%
Santa Barbara County Flood Control and Water Conservation District	M&I	45,486	1.09%
Southern California Area Contractors			
Antelope Valley–East Kern Water Agency	M&I	141,400	3.39%
Castaic Lake Water Agency	M&I	95,200	2.28%
Coachella Valley Water District	M&I	121,100	2.90%
Crestline–Lake Arrowhead Water Agency	M&I	5,800	0.14%
Desert Water Agency	M&I	50,000	1.20%
Little Rock Creek Irrigation District	M&I	2,300	0.06%
Metropolitan Water District of Southern California	M&I	1,911,500	45.81%
Mojave Water Agency	M&I	75,800	1.82%
Palmdale Water District	M&I	21,300	0.51%
San Bernardino Valley Municipal Water District	M&I	102,600	2.46%
San Gabriel Valley Municipal Water District	M&I	28,800	0.69%
San Geronio Pass Water Agency	M&I	17,300	0.41%
Ventura County Flood Control District	M&I	20,000	0.48%
Total Table A Amount		4,172,786	100%
Notes: M&I = municipal and industrial; SWP = State Water Project. Source: DWR 2012			

SOLANO COUNTY WATER AGENCY

SCWA administers the SWP contract for municipalities in Solano County. Table 3.17-2 identifies SWCA's customers with SWP contracts and their respective contracted amounts.

Table 3.17-2 Solano County Water Agency SWP Contracts		
City	Total Contracted Amount (afy)	Percent of SCWA's Table A ¹
City of Benicia	17,200	36.02%
City of Dixon ²	1,500	3.14%
City of Fairfield	14,678	30.74%
City of Rio Vista ³	1,500	3.14%
City of Suisun City	1,300	2.72%
City of Vacaville	8,978	18.80%
City of Vallejo	5,600	11.73%
Total	47,756	100%
<small>Notes: afy = acre-feet per year; SCWA = Solano County Water Agency; SWP = State Water Project. ¹ Ultimate share allocations for Dixon and Rio Vista are not included in the total. If Dixon and/or Rio Vista decide to use SWP water supply, then supplies to Benicia, Fairfield, and Vallejo would be reduced commensurately. ² City of Dixon entitlement available beginning in 2016 is 300 afy. It will be increased to 1,500 afy in 2020. ³ Rio Vista's SWP surface water contract will begin with 300 af in 2016 and will gradually increase by 300 afy annually until the contract reaches its maximum amount of 1,500 af in 2020. After 2020, the annual contract amount will remain at 1,500 af. Source: SCWA 2005</small>		

NAPA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

Napa administers the SWP contract for municipalities in Napa County. The City of Napa also sells retail water to the Town of Yountville and the City of St. Helena. It exports water to the Cities of American Canyon, St. Helena, and Calistoga; the Town of Yountville; and the California Veterans Home. St. Helena, Yountville, and the California Veterans Home are retail customers of the City of Napa, with St. Helena contractually obligated to purchase a minimum amount of Napa water each year (City of Napa 2011). Table 3.17-3 identifies Napa's customers with SWP contracts and their respective contracted amounts.

YUBA CITY

In the Yuba City water service area, SWP water is used to supplement other surface water supplies. As described in Chapter 2 "Project Description," SWP water is used within the Yuba City limits, and no SWP water is subcontracted to other customers. SWP project water is diverted from an intake turnout on the Feather River. A new water intake structure facility and pipeline that would allow the delivery of up to 48 million gallons per day (mgd) of water under all river hydraulic conditions are under construction. Construction is scheduled to be completed by the end of 2013. As described in the settlement agreement with Yuba City, a diversion rate of 60 cfs (38.8 mgd) would be used to deliver SWP water.

**Table 3.17-3
Napa County Flood Control and Water Conservation District SWP Contracts**

City or Town	Total A Amount (afy)	Percent of Napa's Table A
American Canyon ¹	5,200	17.92%
Napa	21,900	75.45%
Yountville ^{2,3}	0	0%
St. Helena ^{2,4}	0	0%
Calistoga ¹	1,925	6.63%
Total	29,025	100%

Notes: afy = acre-feet per year; Napa = Napa County Flood Control and Water Conservation District; SWP = State Water Project.

¹ SWP water is treated and wheeled by the City of Napa to American Canyon and Calistoga.

² The City of Napa purchased the SWP contract allocations for St. Helena and Yountville in 2006 and 2009, respectively.

³ The City of Napa is required to sell Yountville up to 25 af at retail rates for emergency and fire flow needs only.

⁴ St. Helena is required to purchase a minimum of 400 af from the City of Napa each year at retail rates. The minimum annual purchase increases to 600 af if the SWP allocation as of April 15 is 30% or higher. St. Helena has the option to purchase up to 200 af more if the April 15 SWP allocation reaches 50%.

Sources: Amendment 23 to Water Supply Contract between DWR and NCFWCD, SWP Analysis Office No. 09073, October 2009; City of Napa 2011

BUTTE COUNTY

Butte County provides SWP water to in-county water contractors and leases a portion of its annual Table A Amounts to SOD contractors. Table 3.17-4 identifies Butte County's SWP in-county customers and out-of-county lessees and their respective contracted and leased amounts.

**Table 3.17-4
Butte County SWP Contracts and Leases**

Customer	Total A Amount (afy)	Percent of Butte County's Table A
California Water Service, Oroville	2,000 ¹	7.27%
Del Oro Water Company	667.63 ¹	2.43%
Westside Water Districts	14,000 ²	50.91%
Palmdale Water District	10,000 ²	36.36%
Uncontracted	832.37	3.03%
Total	27,500	100%

Notes: afy = acre-feet per year; SWP = State Water Project.

¹ Contracts through 2015.

² Short-term transfer agreements for 2012 and 2013 have been implemented; agreements for the delivery of leased water by DWR under 2014-2021 leases with options for multiple 5-year extensions are pending approval by DWR and the approval of the final Settlement Agreements by all Parties.

Sources: 2011 Water Supply Agreements between Butte County and California Water Service; 2011 Water Supply Agreements between Butte County and Del Oro Water Company

3.17.2 DISCUSSION

a) Violate waste discharge requirements of the applicable Regional Water Quality Control Board?

Implementing the Proposed Project would result in increases in the volume of water delivered to the four Plaintiff Water Contractors. However, these increases in water deliveries would not exceed each of these contractors' existing annual Maximum Table A Allocation in any given year. These volume increases would not exceed the existing wastewater treatment capabilities. Therefore, violation of existing waste discharge requirements is not expected. **No impact** would occur.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Implementing the Proposed Project would result in an increase in the volume of SWP water delivered to the four Plaintiff Water Contractors for municipal water uses. An increase in SWP water deliveries and in the distribution of water supplies would require an increase in water treatment; however, the increase in water deliveries would not exceed the existing annual Maximum Table A Allocation in any given year. Consequently, no new SWP water treatment facilities would need to be constructed. SWP water would be delivered through existing infrastructure in accordance with conveyance provisions and turnout agreements specified in long-term water contracts between DWR and SWP contractors.

The volume of SWP water that would be delivered in any given year would not exceed the existing Maximum Table A Amount. Any changes in operations related to implementing the Proposed Project would not result in the construction of new conveyance facilities other than what is currently planned. **No impact** would occur.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These changes would not involve new construction or other activities, so no stormwater would be generated and no new or expanded stormwater facilities would be required. **No impact** would occur.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Implementing the Proposed Project would result in changes to operation of SWP facilities to increase SWP water delivery to the Plaintiff Water Contractors. Although implementing the Proposed Project would result in the delivery of an increased volume of SWP water, it would not provide new SWP water supplies beyond what is contracted by the four Plaintiff Water Contractors; rather, it would increase water supply reliability and likely reduce the need for water supplies from other sources, such as groundwater, other surface water entitlements, or water transfers from other water districts. Proposed Project implementation could result in a minor change in SOD water deliveries for both municipal and agricultural uses. Refer to the Section 3.2, "Agriculture and Forestry Resources," for discussion of impacts on agricultural water supplies.

As estimated by the CALSIM model, implementing the Proposed Project during critical water years would reduce the delivery of about 10 TAF of water to SOD Water Contractors. During above-normal and below-normal years, it would result in a reduction of about 8–11 TAF acre-feet of SWP water supplies per year to SOD Water Contractors.

As noted previously in Chapter 2, “Project Description,” although the CALSIM model has estimated this minor change in SOD deliveries, in actual practice no change to SOD Water Contractors is expected to occur.

Although implementing the Proposed Project could result in decreases in the availability of SWP water during above- and below-normal years, the reduction could be offset by increased water conservation measures and/or the procurement of water from other sources, which are typical management practices performed by water contractors during dry or critically dry water years. Although changes would result in decreases in the availability of municipal water during certain water years, the reduction would be temporary—occurring only in above- or below-normal water years. Any increase in municipal water availability as a result of implementing the Proposed Project would reduce the need for water supplies from other sources, such as groundwater, other surface water entitlements, or transfer agreements from other water districts. Any increases in SWP water supplies would not be considered a new water source to supply new population growth. Refer to Section 3.13, “Population and Housing,” for a discussion of the growth-inducing effects of implementing the Proposed Project. This impact would be **less than significant**.

- e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project’s projected demand, in addition to the provider’s existing commitments?**

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These changes would not involve new construction or other activities, so no wastewater would be generated. No impact would occur.

- f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?**

Implementing the Proposed Project would result in increases in the volume of SWP water delivered to the four Plaintiff Water Contractors and associated minor changes to existing SWP facility operations. These changes would not involve new construction or other activities, so no solid waste would be generated. No impact would occur.

- g) Comply with federal, state, and local statutes and regulations related to solid waste?**

As stated for item (f), implementing the Proposed Project would not involve new construction or other activities, so no solid waste would be generated. **No impact** would occur.

3.18 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Authority: Public Resources Code Sections 21083 and 21083.05.

Reference: Government Code Section 65088.4.

Public Resources Code Sections 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21093, 21094, 21095, and 21151; *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296; *Leonoff v. Monterey Board of Supervisors* (1990) 222 Cal.App.3d 1337; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

3.18.1 DISCUSSION

- a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?**

The analysis presented in Section 3.4, “Biological Resources,” concludes that implementing the Proposed Project would not substantially degrade the quality of the environment; substantially reduce fish or wildlife habitat; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or reduce the number or restrict the range of an endangered, rare, or threatened species. As discussed in Section 3.4, the minor changes in SWP operations associated with implementing the Proposed Project would result in minimal changes to Lake Oroville storage volume and to the hydrologic and water quality conditions of

the Feather and Sacramento Rivers and the Delta. These minor changes in hydrology and water quality would have no discernible impact on the quality of the environment; fish or wildlife habitat or populations; plant or animal communities; or the number or range of an endangered, rare, or threatened species. Because the effects associated with changing conditions in Lake Oroville storage volume and the hydrologic and water quality conditions of the Feather and Sacramento Rivers and the Delta would be very small and within the margin of error of the models and/or range of existing variability, they would be less than significant.

Changes in SWP operations would be performed in accordance with D-1641 limits and water quality regulatory requirements specified in applicable biological opinions, including X2 compliance positions. If the X2 isohaline were moved away from a required compliance position or these changes prevented a required outflow from being met, SWP operations would be adjusted to meet such requirements.

The analysis presented in Section 3.5, “Cultural Resources.” concludes that implementing the Proposed Project would have no impact on cultural or historical resources; therefore, no examples of California history or prehistory would be affected by implementing the Proposed Project.

b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Section 15064(h)(1) of the CEQA Guidelines states:

When assessing whether a cumulative effect requires an EIR, the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable. An EIR must be prepared if the cumulative impact may be significant and the project’s incremental effect, through individually limited, is cumulatively considerable. “Cumulatively considerable” means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

Based on the analyses presented in Sections 3.1 through 3.17 of this IS, implementing the Proposed Project would have no impact on cultural and historical resources, land use and planning, mineral resources, population and housing, public services, hazards and hazardous materials, and transportation systems. Therefore, the Proposed Project would not contribute to environmental impacts on these resource topics, in combination with other past, current, or probable future projects that have a significant cumulative environmental effect.

The analyses presented in Sections 3.1 through 3.17 found that the Proposed Project would have a less-than-significant impact on aesthetics, agriculture and forestry resources, air quality, biological resources, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, noise, recreation, and utilities and service systems.

The following analysis addresses each of these resource topics to determine whether these less-than-significant impacts would make an incremental contribution to significant cumulative impacts from other past, present, and probable future projects that could be considered cumulatively considerable. Where the cumulative impacts are considered to be significant, the analysis determines whether the Proposed Project’s contributions to these significant cumulative impacts are cumulatively considerable.

PAST AND CURRENT PROJECTS

The CALSIM modeling used to determine changes in surface water hydrology and water quality incorporates the changes of past and present projects that have altered SWP operations. Therefore, conclusions based on CALSIM modeling presented in this IS already consider the cumulative effects of the Proposed Project in combination with other past projects that could alter surface water conditions in SWP reservoirs and the hydrology and water quality of the Feather and Sacramento Rivers and Delta. As concluded in the analyses presented in Chapter 3, the effects of the Proposed Project in combination with those of other past projects would be **less than significant** and are not considered to be cumulatively considerable.

PROBABLE FUTURE PROJECTS

Other probable future projects not included in CALSIM modeling could potentially alter SWP operations and affect the hydrology and water quality of the Feather and Sacramento Rivers and Delta to a greater degree than past and present projects.

Land development projects, ranging from individual single-family residential development to larger residential, commercial, and industrial projects, are continually being proposed in the four NOD plaintiff water contractor service areas. The implementation of these projects does normally involve the approval by the respective land management authority with jurisdiction over the project and does not always involve the approval of the NOD plaintiff water contractor. By their physical characteristics, these land development projects will not contribute to the similar less-than-significant impact on aesthetics, agriculture and forestry resources, air quality, biological resources, geology and soils, GHG emissions, hazards and hazardous materials, hydrology and water quality, noise, recreation, and utilities and service systems that were identified for the Proposed Project.

The potential environmental effects of future land development projects would differ from the Proposed Project by affecting a different geographic area, a different environmental setting, and resulting differences in physical changes to the environment. The construction and operation of residential, commercial, or industrial facilities would contribute to the physical development of the respective communities, whereas the Proposed Project would only provide water to these communities and result no direct physical change to these communities. Therefore, while these land development projects may increase demand for water, including SWP water supplies, their implementation would not create environmental effects that would act in a cumulative manner with the identified effects of the Proposed Project.

Probable future projects that are similar to the Proposed Project and may contribute to cumulative impacts are described below.

Oroville Facilities Relicensing FERC Project No. 2100

The objective of the relicensing process for the Oroville Facilities is to continue operation and maintenance of the Oroville Facilities for electric power generation, along with implementation of any terms and conditions to be considered for inclusion in a new hydroelectric license from the Federal Energy Regulatory Commission.

Bay Delta Conservation Plan and Alternative Delta Conveyance Facilities

The Bay Delta Conservation Plan (BDCP) is a comprehensive effort to provide for the conservation and management of numerous special-status species that are or could potentially be designated in accordance with federal or state endangered-species statutes. The BDCP also endeavors to restore and protect the ability of the CVP and SWP to deliver full contracted water amounts when hydrologic conditions permit. At present, the BDCP is being developed in coordination with interested water users, nongovernmental stakeholders, and interested federal and state agencies with responsibility over issuance of applicable permits.

As part of the BDCP, several alternative Delta conveyance facilities are being considered, including an isolated facility that would convey water around the Delta for export through an isolated canal. Under other alternatives, water would be conveyed through the Delta using an improved channel that would be reinforced with reconstructed levees, and that could operate alone or in combination with an isolated canal. Establishing new, state-of-the-art CVP and SWP intake facilities on the north side of the Delta would attempt to reduce or eliminate fish losses associated with the existing Delta export pumps and return a normal flow pattern to the Delta by eliminating reverse flows caused by the existing pumps and water conveyance to the south Delta. This change could have substantial influence on hydrologic and water quality conditions in the Delta. The BDCP also proposes to convert substantial tracts of land currently protected by levees to intertidal wetlands to increase habitat for several pelagic fish species and improving habitat for other designated species.

Other conservation measures being considered include a series of programs intended to reduce pollutant discharges to the Delta from runoff, toxic spills, and pesticide use; improving low dissolved oxygen conditions; reducing production of methylmercury; and controlling the presence of invasive species and other nonnative predators.

Delta-Mendota Canal Recirculation Project

Reclamation is evaluating the feasibility of the Delta-Mendota Canal Recirculation Project, which would involve recirculating water from the Delta through CVP pumping and conveyance facilities to the San Joaquin River where it enters the Delta. The project would provide flows to reduce salinity concentrations in the San Joaquin River. It could also reduce reliance on New Melones Reservoir for meeting water quality and fishery flow objectives. Reclamation prepared an Initial Alternatives Information Report for the project in March 2008. Reclamation is preparing a feasibility study to evaluate the feasibility, benefits, and impacts of the project.

Delta-Mendota Canal/California Aqueduct Intertie

The Delta-Mendota Canal/California Aqueduct Intertie would consist of constructing and operating a pumping plant and pipeline connection between the Delta-Mendota Canal and the California Aqueduct in the Delta. The intertie would be used in various ways to achieve multiple benefits: meeting current water supply demands, allowing for the maintenance and repair of CVP Delta export and conveyance facilities, and providing operational flexibility to respond to emergencies related to both the CVP and SWP. The intertie would include a 450-cfs pumping plant at the Delta-Mendota Canal that would allow water to be pumped from the canal to the California Aqueduct.

North Bay Aqueduct Alternative Intake Project

DWR is proposing the North Bay Aqueduct Alternate Intake Project in Solano County (DWR 2009b). A joint environmental impact statement/environmental impact report (EIS/R) will be prepared through a collaboration of federal and state agencies and local water agencies. DWR proposes an alternate intake to the North Bay Aqueduct that would connect to the existing aqueduct via an underground pipeline to serve the contractors and users in Solano and Napa Counties. Potential alternative intake (diversion) locations may include sites in Yolo and Sacramento Counties. The North Bay Aqueduct Alternative Intake Project also involves modifying the existing North Bay Aqueduct to increase its capacity. The alternatives to the current intake system will be developed based on the following selection criteria:

- ▶ Improvement of and improved consistency of water quality for the user agencies
- ▶ Potential increase in delivery volumes to the user agencies
- ▶ Comparative project costs within the range of affordability under various funding scenarios to be developed by the user agencies
- ▶ Environmental and permitting considerations

San Luis Reservoir Low Point Improvement Project

Reclamation and the Santa Clara Valley Water District are preparing an EIS/R for the San Luis Reservoir Low Point Improvement Project, which would use one alternative or a combination of alternatives, including treatment options, bypasses, and other storage options, to reduce the risk of “low point” water levels (Reclamation 2008b). When water levels in San Luis Reservoir are low, high water temperatures combined with wind-induced mixing result in algal blooms at the reservoir’s water surface. This condition degrades water quality, making it difficult or impractical to treat the water, and preventing deliveries from San Luis Reservoir. To solve the low-point problem, Reclamation and DWR have operated the reservoir to maintain water levels above the critical low elevation, or low point, requiring that approximately 200 TAF of water remain as “carryover” in the reservoir. The project may provide opportunities for ecosystem restoration.

Given the likelihood of growth in future water demands, along with additional regulatory requirements, it is anticipated that storage in San Luis Reservoir will be more fully exercised and result in more frequent and lower late-summer storage levels in the reservoir (Reclamation 2008b).

A notice of intent/notice of preparation (NOI/NOP) for an EIS/R was released in 2002 and public scoping meetings were held that same year. In 2004, the project transitioned to a partnership with Reclamation and the initiation of a 3-year federal feasibility study and EIS/R for the project. A final appraisal report for the San Luis Reservoir Low Point Improvement Project was issued in 2006. That report recommended that a federal feasibility study be initiated to further assess potential measures for resolving these water-related issues. To fulfill the requirements of the National Environmental Policy Act, public scoping meetings were again held in September 2008. The purpose of the scoping meetings was to reinstate these public involvement activities and seek input from the public on the alternatives being carried forward into the federal feasibility study and EIS/R. The NOI/NOP was issued in August 2008, and an environmental scoping report was prepared in December 2008.

North-of-the-Delta Offstream Storage Investigation

Pursuant to the record of decision for the CALFED programmatic EIS/R, Reclamation and DWR are partnering with local interests to prepare a feasibility study for the North-of-the-Delta Offstream Storage Investigation (DWR 2009d). This study is evaluating potential offstream surface water storage projects in the upper Sacramento River Basin that could improve water supply and reliability, enhance survival of anadromous fish, and provide high-quality water for agricultural, municipal and industrial (M&I), and environmental uses. The project could increase water supplies available for export in years when export supplies would otherwise be limited. This project also could modify the timing and magnitude of upstream reservoir releases in wet years.

An NOI/NOP for this project was issued in November 2001, and public scoping for the project occurred in January 2002. Completion of the final feasibility report and publication of the draft EIS/R are anticipated in 2013.

2-Gates Fish Protection Demonstration Project

Under the 2-Gates Fish Protection Demonstration Project, San Luis & Delta Mendota Water Authority and Reclamation would install and operate removable gate structures at two key Delta locations to test the ability of the structures to improve protection for delta smelt and other sensitive aquatic species. In a 5-year pilot study, the gates would control flows in selected interior Delta channels to evaluate whether these changes reduce entrainment of fish into pumps and improve water supplies to the SWP and CVP.

Recovery Plan for the Sacramento–San Joaquin Delta Native Fishes

USFWS's recovery plan addresses the recovery needs for several fishes, including delta smelt, Sacramento splittail, longfin smelt, green sturgeon, Chinook salmon (spring-run, late fall–run, and San Joaquin fall-run), and Sacramento perch. The objective of the plan is to establish self-sustaining populations of these species that will persist indefinitely.

Liberty Island Conservation Bank

Reclamation District 2093's project would restore 1,000 acres in a conservation bank to preserve, create, restore, and enhance habitat for native Delta fish species by creating tidal channels, perennial marsh, riparian habitat, and occasionally flooded uplands on the site.

Franks Tract Project

DWR and Reclamation are evaluating the feasibility of modifying the hydrodynamic conditions near Franks Tract to improve Delta water quality and enhance the aquatic ecosystem. The project gates would be operated seasonally and during certain hours of the day, depending on fisheries and tidal conditions.

Central Valley Flood Protection Plan

Legislation passed in 2007 directed DWR to develop three documents that will guide improvement of integrated flood management:

- ▶ State Plan of Flood Control (SPFC) Descriptive Document to inventory and describe the flood management facilities, land, programs, conditions, and mode of operations and maintenance for the state-federal flood protection system in the Central Valley.
- ▶ Flood Control System Status Report to assess the status of the facilities included in the SPFC Descriptive Document, identify deficiencies, and make recommendations.
- ▶ Central Valley Flood Protection Plan to describe a sustainable, integrated flood management plan that reflects a systemwide approach for protecting areas of the Central Valley currently receiving protection from flooding by existing facilities of the SPFC.

The EIR for the 2012 Central Valley Flood Protection Plan was certified by DWR in June 2012 and adopted by the Central Valley Flood Protection Board on June 29, 2012.

FloodSAFE California

Under the FloodSAFE Program, DWR works with local, regional, state, tribal, and federal officials to improve flood management and emergency response systems throughout California.

Delta Levees Flood Protection Program

DWR administers the Delta Levees Flood Protection Program (Water Code Sections 12300–12318 and 12980–12995). The program, through its two major components (Delta Levees Maintenance Subventions Program and Delta Levees Special Flood Control Projects), works with the local agencies to maintain, plan, and complete levee rehabilitation projects.

Levee Repair Levee Evaluation Program

DWR was directed to implement repairs of critical erosion sites. These repairs are necessary to maintain the functionality of flood control systems that have deteriorated over time and/or do not meet current design standards.

Perris Dam Remediation Program

DWR certified an EIR and approved the Perris Dam Remediation Program in 2011. The program is being implemented to eliminate risks associated with seismic instability of the current Perris Dam.

San Joaquin River Restoration Program

Reclamation, USFWS, NMFS, DWR, and CDFW are leading the San Joaquin River Restoration Program, which is currently under development. The final EIS/R for the program was certified in 2011.

The San Joaquin River Restoration Program was formed in response to a 2006 settlement of an 18-year-old lawsuit between the U.S. Departments of the Interior and Commerce, the Natural Resources Defense Council, and the Friant Water Users Authority. The goal of the settlement is to restore and maintain fish populations in “good condition” in the main stem of the San Joaquin River below Friant Dam to the confluence of the Merced River, including naturally reproducing and self-sustaining populations of salmon and other fish (the “Restoration Goal”).

The settlement also includes a goal to reduce or avoid adverse water supply impacts on all of the Friant Division long-term contractors that may result from the Interim Flows and Restoration Flows provided for in the settlement (the “Water Management Goal”).

DWR intends to assist in various aspects of the planning, design, and construction of physical improvements identified in the settlement. These improvements include projects related to flood protection, levee relocation, and design and construction of facilities to provide for fish passage and to minimize fish entrainment, the establishment of riparian habitat, and water surface and water quality monitoring. DWR also intends to assist in various aspects of the implementation of the Water Management Goal.

South Delta Temporary Barriers Project

The South Delta Temporary Barriers Project consists of four rock barriers installed across South Delta channels. Of the four rock barriers, the Head of Old River barrier serves as a fish barrier, while the remaining three barriers serve as agricultural barriers. The objectives of the program are to increase water levels, circulation patterns, and water quality in the South Delta for local agricultural diversions, and to improve the SWP’s operational flexibility to help reduce fishery impacts and improve fishery conditions. Water levels and water circulation in the South Delta have improved with installation of the agricultural barriers. Migration conditions for San Joaquin River salmon have improved since the Head of Old River barrier was installed.

North Delta Flood Control and Ecosystem Restoration Project

DWR is developing the North Delta Flood Control and Ecosystem Restoration Project. DWR certified the final EIR for this project in 2010.

State Water Project

The State Water Resources Development System, commonly known as the SWP, is the project authorized and financed by the California Water Resources Development Bond Act, also known as the Burns-Porter Act (Water Code Section 12930 *et seq.*). The Burns-Porter Act was passed by the California Legislature in 1959 and approved by voters in 1960.

The Burns-Porter Act expressly authorized the State of California to enter into contracts for the sale, delivery, or use of water made available by the SWP in return for payment of a major portion of the capital and operation costs of the SWP. The first of these contracts was signed with MWD on November 4, 1960, and served as a prototype for all subsequent SWP long-term water supply contracts. The Burns-Porter Act and the long-term contracts provide the institutional structure supporting the operation and financing of the SWP (Water Code Section 11450 *et seq.*; Water Code Section 12930 *et seq.*). DWR currently has contracts with 29 water agencies. Collectively known as the SWP Contractors, these 29 water agencies deliver water directly to agricultural and urban water users or to water wholesalers or retailers.

Each contract for long-term water supply contains a Table A that sets forth the maximum amount of dependable SWP water that the state agrees to deliver, if available for delivery, to a contractor on an annual basis. The state and SWP contractors also use Table A Amounts to serve as a basis for allocation of some SWP costs among the contractors. The precise amount of water received in any given year will depend on hydrologic conditions and SWP operations. If deliveries have not reached the total of Table A Amounts held by all 29 contractors, the actual

amount received in any given year by a particular contractor will be a proportion of the available water supplies based on its Table A Amount.

The water supply contracts call for progressive increases in the amount of Table A water delivered to each contractor, and are structured to reflect increasing water demands. Most contractors reached their Maximum Table A in 1990. Originally, the Maximum Table A Amounts were anticipated to be a collective total of 4,230,000 acre-feet per year (afy) by 2020. This number is also referred to as the “minimum project yield.” As a result of contract amendments in the 1980s and the Monterey Amendment in 1995, the current combined maximum annual Table A Amount is 4,172,686 afy.

As the contractors’ Table A Amounts increased, the expectation was that additional facilities would be built to meet the expected demand. Project development unfolded substantially as planned through the 1960s and early 1970s. Major components of the SWP were built and put into service, and the contractors took increasing quantities of water from the SWP.

Circumstances began to change in the 1970s. Various environmental, political, financial, and hydrologic factors prevented the development of some components of the SWP. Demands for SWP water are expected to rise as the population of California continues to increase.

The Monterey Agreement

The SWP contracts were originally executed in the 1960s. Contract provisions reflected DWR’s expectations at that time with respect to future water demand and the construction schedule of SWP components. DWR and the SWP Contractors made many amendments to the contracts to resolve disagreements and address matters that arose over a 30-year period, but the most important contract provisions remained substantially unchanged until the early 1990s.

The water contracts in place through the mid-1990s contained provisions that specified how water would be allocated to contractors when the requested Table A Amounts exceeded the available water supply. Specifically, Article 18 included two provisions intended to address short-term and permanent shortages, and one that addressed changes in the minimum project yield. Article 18(a) directed the state to reduce deliveries to agricultural contractors by a percentage not to exceed 50% in any series of 7 years before reducing water deliveries for other purposes. If additional reductions were needed, the contract specified that further reductions would be borne by all contractors. Article 18(b) dealt with permanent shortages and specified that DWR would reduce Table A Amounts to all contractors such that the Table A Amount equaled the minimum project yield. Article 18(d) allowed DWR to revise Table A Amounts upward after implementing Article 18(b) if future conditions justified a revision.

During the drought in 1986–1992, water supply to agricultural contractors was drastically reduced. Agricultural water users were exposed to 50% reductions before the municipal water contractors experienced reductions in deliveries. Then, in 1991, the supplies to agricultural contractors were cut 100%. During this time agricultural contractors were contractually required to make payments for Table A Amounts even though they received no water. M&I contractors also recognized that the SWP supplies were not as dependable from year to year as they had anticipated, and began developing local water supplies and projects that could more effectively use surplus

storage. However, opportunities for such projects within each contractor's service area were limited and M&I users were seeking contract amendments to store SWP water outside their service areas.

Certain agricultural contractors began to complain about the lack of supply from the SWP during dry years, and disagreements arose among DWR, the agricultural contractors, and the urban contractors over water allocations during shortages. In 1994, to resolve these disagreements, mediated negotiations began between DWR, some of the water contractors, and the Central Coast Water Authority (a joint powers authority representing two contractors, San Luis Obispo County Flood Control and Water Conservation District [CFC & WCD] and Santa Barbara CFC & WCD). Soon after negotiations began, the Parties determined that the water allocation problem could not be addressed in a single issue. The Parties adopted a broader approach to addressing water allocation and a number of other related issues pertaining to the management and financing of the SWP.

These discussions took place in Monterey and led to the development of a set of 14 principles to modify the long-term water supply contracts. With regard to water allocation, they deleted the provisions that required agricultural contractors to take first shortages and allowed them first priority on surplus water. Instead, all water was to be allocated on a pro-rata share based on each contractor's Table A Amount. The broader issues that the negotiators addressed included the development of measures to facilitate the more effective management of the more limited SWP water supplies anticipated to be available to them in the future.

Later in 1994, DWR and 27 of the 29 SWP contractors agreed to the Monterey Agreement. An EIR was prepared on the Monterey Agreement, with the Central Coast Water Authority acting as the lead agency. After certification of the EIR in 1994, DWR and the contractors incorporated most of the principles into a contract amendment named the Monterey Agreement. All SWP contractors except Plumas CFC & WCD and Empire West Side Irrigation District signed the Monterey Amendment. These two contractors continue to receive SWP water from DWR in accordance with the SWP contracts in effect before the Monterey Agreement.

After completion and certification of the Monterey Agreement EIR, the Planning and Conservation League (and several other plaintiffs) filed a lawsuit challenging the adequacy of the EIR for the Monterey Amendment. It also argued that DWR should be lead agency for the preparation and certification of the EIR. A Sacramento County Superior Court judge later dismissed the lawsuit. The Planning and Conservation League appealed the decision and on September 15, 2000, the Third District Court of Appeal reversed the Superior Court ruling. On December 13, 2000, the California Supreme Court denied review. The Parties commenced mediation; proceedings in Superior Court were stayed pending completion of mediation.

The Parties executed a settlement agreement in May 2003. The Monterey Settlement Agreement allowed the SWP to continue to operate pursuant to the Monterey Agreement while the new EIR was being prepared.

The Monterey Settlement Agreement provides a way for the contractors and the plaintiffs to advise DWR in the preparation of the new EIR and commits DWR to several actions: deleting references to the term "entitlement" in the long-term water supply contract, developing a water supply reliability report to be published every 2 years, and providing a greater opportunity for public involvement in SWP activities. The Monterey Settlement Agreement also requires that DWR and the contractors not rely on the Monterey Agreement EIR to approve any new project or activity that was not approved, initiated, or implemented before March 26, 2011, and that could require separate environmental documentation. Provisions in the Monterey Settlement Agreement also called for up to \$8 million to be paid to Plumas CFC & WCD beginning in 2003, primarily for watershed improvement for

the mutual benefit of related purposes. The agreement called for these funds to be disbursed with input from a forum composed of representatives of Plumas CFC & WCD, DWR, and SWP contractors. To date, \$4 million has been paid to Plumas CFC & WCD.

On February 1, 2010, DWR prepared and certified a final EIR for the Monterey Plus project. Shortly thereafter the Central Delta Water Agency and other plaintiffs filed suit in the Sacramento County Superior Court. The plaintiffs' petition for writ of mandate and complaint for declaratory and injunctive relief challenged the sufficiency of the new Monterey Plus EIR under CEQA. The plaintiffs also challenged the validity of the Monterey Amendment, the Kern Fan Element Transfer Agreement, and the ~~Attached A~~-Amendments. ~~Additionally, the plaintiffs brought a reverse validation action against DWR challenging the validity of the agreement to transfer the Kern Fan Element property from DWR to Kern County Water Agency, and brought a mandamus cause of action as an alternative to the reverse validation action.~~ In December 2012, a Sacramento County Superior Court judge ruled in favor of DWR and other real parties in interest and dismissed the plaintiffs' reverse validation and related mandamus claims, thereby leaving only the plaintiffs' CEQA cause of action to still be litigated in the Sacramento County Superior Court. ~~The CEQA cause of action is still being litigated in the Sacramento County Superior Court.~~

Recovery Plan for the Sacramento–San Joaquin Delta Native Fishes

The USFWS recovery plan addresses the recovery needs for several fishes: delta smelt, Sacramento splittail, longfin smelt, green sturgeon, Chinook salmon (spring-run, late fall–run, and San Joaquin fall-run), and Sacramento perch. The objective of the plan is to establish self-sustaining populations of these species.

Public Draft Recovery Plan for Sacramento River Winter-Run Chinook Salmon, Central Valley Spring-Run Chinook Salmon, and Central Valley Steelhead

The NMFS draft recovery plan provides a road map that describes the steps, strategy, and actions that should be taken to return winter-run Chinook salmon, spring-run Chinook salmon, and steelhead to viable status in the Central Valley, thereby ensuring their long-term persistence and evolutionary potential.

Liberty Island Conservation Bank

The Reclamation District 2093 project at Liberty Island would restore 1,000 acres in a conservation bank to preserve, create, restore, and enhance habitat for native Delta fish species by creating tidal channels, perennial marsh, riparian habitat, and occasionally flooded uplands on the site.

Delta Wetlands Project

The Semitropic Water Storage District Delta Wetlands Project dates back to 1987, when Delta Wetlands, a California Corporation, proposed a project for water storage and wildlife habitat enhancement on four privately owned islands in the Delta. The four islands considered were Bacon Island and Bouldin Island in San Joaquin County and Holland Tract and Webb Tract in Contra Costa County, encompassing approximately 23,000 acres. The project would involve diverting and storing winter flows on Bacon Island and Webb Tract for beneficial uses in summer and developing seasonal wetlands and riparian habitats on Bouldin Island and most of Holland Tract. The project would divert 312,000 af of water from the Delta through large siphons from December 15 through May 1.

Meins Landing Restoration

This is a project of DWR, the Suisun Marsh Preservation Agreement agencies, and the State Coastal Conservancy regarding a 666-acre property that would be restored to tidal marsh and to meet wetlands restoration goals of other projects.

Dutch Slough Tidal Marsh Restoration Project

The purpose of the DWR Dutch Slough Tidal Marsh Restoration Project, located near Oakley, is to restore wetlands and uplands and to provide public access to the 1,166-acre property.

South Delta Temporary Barriers Project

To support the DWR Temporary Barriers Program, the DWR Central District collects various types of information about water conditions in Delta channels near the barriers at three times of year: during spring construction, while operating during the irrigation season, and during fall removal. Stations that continuously monitor tide, electrical conductivity, and temperature are operated year-round in Middle Slough at Victoria Canal and upstream and downstream of the Old River barrier site near the Delta-Mendota Canal intake. Turbidity samples are collected twice a day upstream and downstream of the barriers during construction.

While the barriers are in place, weekly sampling of temperature, dissolved oxygen, ammonia, chlorophyll, turbidity, nitrogen, nitrates, electrical conductivity, and orthophosphates is conducted at 10 sites in the south Delta. Under requirements set by the Office of State Water Project Planning, these sampling runs must be completed by morning to capture daily minimum dissolved oxygen. Special measurements, such as tide and flow measurements, are performed when requested by the Office of State Water Project Planning. In addition, channel cross sections are measured at each barrier site before installation and after removal to ensure that all barrier material has been removed.

Butte County–Palmdale Water District Water Transfer

This project is a multiyear Table A water transfer between Butte County and PWD. The district is implementing a multiyear agreement, with an option for multiple additional 5-year extensions, to transfer a portion of Butte County's SWP Table A Amount. The intent of the agreement is to improve PWD's water supply reliability and to help meet its existing and anticipated water demands during the term of the project. The proposed transfer would include the water derived annually from 10,000 af of Butte County's Table A Amount, and a portion of any additional unused water that Butte County may have in any particular year. The leased water will be conveyed through existing SWP infrastructure under current SWP permits and licenses. The water transfer requires DWR approval and is subject to CEQA. The water will become part of the SWP delivery schedule between PWD and DWR. PWD will make all necessary arrangements with DWR for the conveyance of the water to the district's service areas.

Butte County–Westside Water Districts Water Transfer

This project is a multiyear Table A water transfer between Butte County and the Westside Districts. The Westside Districts consist of the following five water districts: Berrenda Mesa Water District, Belridge Water Storage District, Lost Hills Water District, Wheeler Ridge–Maricopa Water Storage District, and Dudley Ridge Water

District. The Westside Districts are implementing a multiyear agreement (a 2-year agreement and an 8-year agreement), with an option for multiple additional 5-year extensions, to transfer a portion of Butte County's unused SWP Table A Amount. The intent of the agreement is to improve the Westside Districts' water supply reliability and to help meet its existing agricultural water demands for farmed acreage during the term of the Proposed Project. The proposed transfer would include the water derived annually from 14,000 af of Butte County's Table A Amount, and a portion of any additional unused water that Butte County may have in any particular year. The transferred water will be conveyed through existing SWP infrastructure under current SWP permits and licenses. The water transfer requires DWR approval and is subject to CEQA. The water will become part of the SWP delivery schedule between the Westside Districts, through Dudley Ridge Water District and Kern County Water Agency and DWR. The Westside Districts will make all necessary arrangements with DWR for the conveyance of the water to the Westside Districts' service areas.

AESTHETIC RESOURCES

The implementation of the related probable future water supply, ecosystem restoration, water quality, flood control, and Delta enhancement projects, in combination with the effects of past and present projects, has the potential to generate physical changes that could alter water surface elevation in Lake Oroville or San Luis Reservoir. Because these reservoirs are typically drawn down in the summer months to meet SWP contractor demands, it is expected that future projects or conditions that further restrict SWP supplies or increase demand will result in greater reservoir drawdown.

Although reservoir drawdown is associated with greater aesthetic degradation, seasonal reservoir drawdown is a normal function of SWP water storage facilities and exposed shoreline zones are an unavoidable occurrence related to these facilities' operation. Future cumulative effects could result in greater exposed shoreline zones corresponding to increased drawdown of the reservoir or greater frequency of drawdown. No new vistas or scenic views would be exposed to these exposed shoreline zones.

An increase in the frequency of reservoir surface water drawdown and exposure of shoreline area resulting from the combination of the Proposed Project along with these other projects would constitute a minor, less-than-significant impact because it would remain within the existing operating parameters of these two storage facilities and have negligible effects on increased exposure of shoreline areas. Consequently, the Proposed Project would not cause a cumulatively considerable incremental contribution to a significant cumulative impact on Lake Oroville or San Luis Reservoir.

AIR QUALITY

The implementation of the related probable future water supply, ecosystem restoration, water quality, flood control, and Delta enhancement projects, in combination with the effects of past and present projects, has the potential to increase air pollutant emissions through the construction of new features, such as earthmoving equipment for levee construction, and the operation of SWP facilities, such as the use of electric pumps to convey water to SWP water contractor service areas. Other air pollutant emissions could occur from other sources, such as restored wetlands or exposed soil surfaces.

The contribution of the Proposed Project to the cumulative total emissions from past, present, and reasonably foreseeable future projects is anticipated to be minimal and would not be considered to be a cumulatively considerable incremental contribution to a significant cumulative impact on air quality.

BIOLOGICAL RESOURCES

The implementation of the related probable future water supply, ecosystem restoration, water quality, flood control, and Delta enhancement projects, in combination with the effects of past and present projects, has the potential to cumulatively affect aquatic and fish populations in the Sacramento River system and Delta. As discussed in Section 3.9.2 of this analysis, the Proposed Project would have a minimal effect on the hydrology and water quality of these waterways and associated fish and aquatic species. Therefore, the anticipated effect of the Proposed Project would not constitute a cumulative considerable incremental contribution to a significant cumulative impact on biological resources.

As noted in Section 3.1, “Aesthetics,” although the effects of the Proposed Project with other past, present, and reasonably foreseeable future projects could contribute to further declines in reservoir water surface elevation at Shasta Lake and San Luis Reservoir, including greater frequency of drawdown, such changes would not have an adverse effect on terrestrial biological resources in the adjacent upland areas. Therefore, there would not be any cumulatively considerable incremental contribution to a significant cumulative impact on biological resources from increased drawdowns at Shasta Lake and San Luis Reservoir.

GREENHOUSE GAS EMISSIONS

As noted in Section 3.7.1, the Proposed Project’s incremental contribution to the cumulative impact of increasing atmospheric levels of GHGs would be less than cumulatively considerable.

HYDROLOGY AND WATER QUALITY

The implementation of the related reasonably foreseeable future water supply, ecosystem restoration, water quality, flood control, and Delta enhancement projects, in combination with the effects of past and present projects, has the potential to generate physical changes that could degrade water quality. In addition, these other reasonably foreseeable future projects have the potential to create long-term changes in the rates of erosion and sedimentation in river and Delta waterways. Physical improvements associated with these other water supply, ecosystem restoration, water quality, flood control, and Delta enhancement projects could reduce groundwater supplies or groundwater recharge. Potential adverse impacts could include declines of groundwater because treated wastewater could be diverted to reuse.

The Proposed Project’s potential effect on the location of the X2 isohaline would result in a minor increase in the salinity levels of the Delta. This increase, when combined with the effects of other past, present, and reasonably foreseeable future projects, could contribute to the potential exceedance of water quality standards. Although the cumulative impact on Delta salinity from the combined effect of the Proposed Project and other past, present, and reasonably foreseeable future projects has the potential to be substantial, the incremental contribution from the Proposed Project would be minimal and not readily detectable. Therefore, the Proposed Project would not make a cumulatively considerable incremental contribution to a significant cumulative impact on Delta salinity or violations of water quality standards.

RECREATION

The implementation of the related reasonably foreseeable future water supply, ecosystem restoration, water quality, flood control, and Delta enhancement projects, in combination with the effects of past and present projects, has the potential to cumulatively affect recreational opportunities in Lake Oroville and San Luis Reservoir by altering SWP operations. As discussed in Section 3.1, “Aesthetics,” it is expected that other future projects or conditions that further restrict SWP supplies or increase demand will result in greater and more frequent seasonal reservoir drawdown.

An increase in the frequency of reservoir surface water drawdown would result in limits on the use of those recreational facilities that cease function at specific water elevations or would impede recreational uses that are associated with water elevation or surface area. The minor changes in reservoir surface elevations estimated for the Proposed Project would not contribute in a cumulatively considerable manner to the effect that may occur with implementation of the other past, present, and reasonably foreseeable future projects. The cumulative impact from the combination of the Proposed Project along with these other projects would be minimal and less than significant because the resulting water surface elevation and use of existing recreational facilities and opportunities would continue within the existing operating parameters of these two water storage facilities. Therefore, the Proposed Project would not make a cumulatively considerable incremental contribution to a significant cumulative impact on recreation or recreational facilities.

UTILITIES AND SERVICE SYSTEMS

The implementation of the related reasonably foreseeable future water supply, ecosystem restoration, water quality, flood control, and Delta enhancement projects, in combination with past and present projects, has the potential to both reduce and maintain SWP water deliveries. Implementation of these projects has the potential to affect surface water quality, river and Delta hydrology, operations of various SWP facilities, and other activities that could alter Delta water circulation, implementation of water conservation measures, and development of other regional water supplies.

The minor changes in water deliveries associated with the Proposed Project would not contribute in a cumulatively considerable manner to the significant cumulative effect that may occur with implementation of the other future projects. Although minor changes to SOD deliveries are estimated, in practice no change to SOD SWP water deliveries would occur. Therefore, the Proposed Project would not make a cumulatively considerable incremental contribution to a significant cumulative impact on utilities and service systems.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

Based on the analyses presented in Sections 3.1 through 3.17 of this IS, implementing the Proposed Project would not result in environmental effects that would cause substantial adverse direct or indirect effects on human beings. As stated previously, for many resource topics, the Proposed Project would have no impact. The effects that have been identified in these analyses would be less than significant.

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5 DOCUMENT PREPARATION

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Nancy Quan Supervising Engineer

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Kristine Olsen Document Specialist

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6 IS/ND DISTRIBUTION

State Agencies

California Department of Water Resources
California Department of Fish and Wildlife
California Natural Resources Agency
California State Water Resources Control Board

Plaintiffs/Intervenors

Alameda County Flood Control & Water Conservation District, Zone 7
Alameda County Water District
Antelope Valley-East Kern Water Agency
Castaic Lake Water Agency
Central Coast Water Authority
City of Yuba City
Coachella Valley Water District
County of Butte
Kern County Water Agency
Metropolitan Water District of Southern California
Mojave Water Agency
Napa County Flood Control and Water Conservation District
Palmdale Water District
San Geronio Pass Water Agency
Santa Clara Valley Water District
Solano County Water Agency
Tulare Lake Basin Water Storage District

Nonintervening Parties (Other State Water Project Contractors)

Alameda County Water District
County of Kings
Crestline-Lake Arrowhead Water Agency
Desert Water Agency
Dudley Ridge Water District
Empire Westside Irrigation District
Littlerock Creek Irrigation District
Oak Flat Water District
Palmdale Water District
Plumas County Flood Control and Water Conservation District
San Bernardino Valley Municipal Water District
San Gabriel Valley Municipal Water District
San Luis Obispo County Flood Control and Water Conservation District
Santa Barbara County Flood Control and Water Conservation District
Ventura County Watershed Protection District

Libraries

Beale Memorial Library
701 Truxtun Avenue
Bakersfield, CA 93301

Colusa County Library
738 Market Street
Colusa, CA 95932

Mary L. Stephens Davis Branch
Library
315 E. 14th Street
Davis, CA 95616

El Centro Public Library
Community Center Branch
375 South 1st Street
El Centro, CA 92243

Fairfield Civic Center Library
1150 Kentucky Street
Fairfield, CA 94533

Fremont Library
2400 Stevenson Boulevard
Fremont CA 94538

Hanford Branch Library
401 North Douty Street
Hanford, CA 93230

Los Angeles Public Library
Central Library
630 West 5th Street
Los Angeles, CA 90071

Merced County Library
Merced Branch
2100 O Street
Merced, CA 95340

Modesto Public Library
1500 I Street
Modesto, CA 95354

Napa Main Library
580 Coombs Street
Napa, CA 94559

Oroville Branch Library
1820 Mitchell Avenue
Oroville, CA 95966

Pleasant Hill Library
1750 Oak Park Boulevard
Pleasant Hill, CA 94523

Quincy Public Library
445 Jackson Street
Quincy CA 95971

Red Bluff Library
645 Madison Street
Red Bluff, CA 96080

Redding Library
1100 Parkview Avenue
Redding, CA 96001

Riverside Public Library
Main Library
3581 Mission Inn Avenue
Riverside, CA 92501

Sacramento County Library
Central Library
828 I Street
Sacramento, CA 95202

Norman F. Feldheim Central
Library
555 West 6th Street
San Bernardino, CA 92410

San Diego Public Library
Central Library
820 E Street
San Diego, CA 92101

Dr. Martin Luther King, Jr.
Library
150 East San Fernando Street
San Jose, CA 95112

San Luis Obispo Library
995 Palm Street
San Luis Obispo, CA 93401

Central Library
40 East Anapamu Street
Santa Barbara, CA 93101

Cesar Chavez Central Library
605 N. El Dorado Street
Stockton, CA 95202-1907

E. P. Foster Library
651 East Main Street
Ventura, CA 93001

Visalia Branch Library
200 West Oak Avenue
Visalia, CA 93291

Willows Public Library
201 North Lassen Street
Willows, CA 95988

Sutter County Library
Main Branch
750 Forbes Avenue
Yuba City, CA 95991

APPENDIX A

Agreements in Principle

Mediation/Settlement Privileged & Confidential

**Resolution of Solano County Water Agency et al., v. Department of Water Resources
Sacramento County Superior Court Case No: 34-2008-00016338 CU-BC-GDS**

**Agreement in Principle for
Solano County Water Agency (SCWA)**

May 7, 2012

Introduction

The negotiating teams for the parties in *Solano County Water Agency (“SCWA”) et al. v. DWR*, including the Plaintiffs¹, the State of California Department of Water Resources (“DWR”) and Intervenor², agree to recommend that their governing bodies and the State of California, respectively, authorize the use of the Agreements in Principle among the Plaintiffs, State of California, and Intervenor as the basis for completing Settlement Agreements for each plaintiff and the other parties to settle this case.

Each party spent significant time and effort seeking to resolve these issues, culminating in a final settlement conference on April 30, 2012. At that final settlement conference, the Negotiation Team for the Plaintiffs included representatives and legal counsel from SCWA, Napa, Yuba City, and Butte County. The Negotiation Team for the State of California included representatives and legal counsel from the Department of Water Resources and the California Attorney General’s Office. The Negotiation Team for the Intervenor included representatives from Kern County Water Agency, the Metropolitan Water District of Southern California, Coachella Valley Water District, and Alameda County Water District, and legal counsel representing all of the Intervenor.

The Agreement in Principle memorializes the key material terms of the proposed settlement reached among the Negotiating Teams for Plaintiffs, DWR, and Intervenor, as to SCWA. This Agreement in Principle is part of a package of four individual Agreements in Principle, each one tailored for the individual Plaintiff, plus associated implementing documents.

The set of Agreements in Principle are not contracts or enforceable legal documents. Rather, the key material terms will be used by the parties’ attorneys to prepare the legal documents that will contain all of the terms and provisions of the four proposed Settlement Agreements to be signed by the Parties.

The implementation of the Settlement Agreements will be subject to and contingent upon, among other things, completion of any necessary environmental analysis and documentation, compliance with any required laws, regulations or permits, conducting any necessary public review, preparation of appropriate contract amendments, and any other necessary actions by the Parties.

¹ Solano County Water Agency (“SCWA”), Napa County Flood Control and Water Conservation District (“Napa”), City of Yuba City (“Yuba City”), and County of Butte (“Butte County”) (collectively “Plaintiffs”).

² The Intervenor consist of the following SWP Contractors: the Metropolitan Water District of Southern California, Alameda County Flood Control & Water Conservation District, Zone 7, Alameda County Water District, Antelope Valley-East Kern Water Agency, Castaic Lake Water Agency, Central Coast Water Authority, Coachella Valley Water District, Kern County Water Agency, Mojave Water Agency, Palmdale Water District, San Geronio Pass Water Agency, Santa Clara Valley Water District, and Tulare Lake Basin Water Storage District (collectively the “Intervenor”).

Subject to the recitals above, the Parties agree to the following terms in principle:

1. North of Delta Allocation:

- a. **General:** DWR determines State Water Project (“SWP” or “Project”) Table A Allocations using existing SWP facility capacities, storage conditions, contractor requests, other demands for SWP water, operational and regulatory restrictions, available hydrologic forecast data, as well as other factors that may affect the available supply and the ability to deliver Project water. Each year that this Agreement is in effect, DWR shall calculate a separate SWP Table A Allocation for SCWA, Napa, and Yuba City (“the North of Delta (NOD) Contractors”), defined as the NOD Allocation.
- b. **Method:** DWR shall determine which operational or regulatory restrictions impact water availability to only the South of Delta (“SOD”) export facilities and which operational or regulatory restrictions have a system-wide impact on water availability to the Project in general. Operational or regulatory restrictions that impact water availability to only SOD export facilities shall not affect the NOD Allocation. Operational or regulatory restrictions that impact water availability to the Project in general shall affect the NOD Allocation based on an allocation of responsibility for each such restriction among the contractors.
- c. **Current Allocations:** Until the State Water Resources Control Board (“SWRCB”) changes D-1641 or Endangered Species Act (“ESA”) or other environmental or regulatory requirements affecting SWP operations change, the parties agree that DWR’s current operations pursuant to SWRCB D-1641 impact system wide Table A Allocation capabilities of the SWP.

The parties also agree that while current operational requirements pursuant to the ESA impact mostly the SOD Table A Allocation, these ESA requirements also impact the NOD Table A Allocation to the extent that they impact Delta water quality or increase Delta outflow requirements of the SWP. DWR calculates an “Allocation Analysis” that is derived from model runs that are used to identify possible Table A Allocations. An example of this Analysis is attached hereto as Exhibit A.

The Allocation Analysis is updated as new information becomes available during the water year, usually monthly during the winter/spring season. One part of the current Allocation Analysis is a simulation of the SWP operating under D-1641. For the current NOD Allocation referenced in this subsection, that Analysis is expected to be used in the determination of the NOD Allocation.

- d. **Future Changes:** DWR will evaluate the extent to which new or different operational or regulatory restrictions affect the NOD Allocation and will consult with the SWP Contractors regarding the impact, if any, of the changed circumstances on the NOD Allocation method prior to implementation of any change.

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SCWA Agreement in Principle— May 7, 2012

e. **Other Conditions:**

- i. Each NOD Contractor's SWP Table A Allocation shall not exceed that NOD Contractor's annual Table A amount contained in its SWP Contract.
- ii. The NOD Allocation shall not affect the ability of any NOD Contractor to participate in and benefit from future SWP facilities.
- iii. The NOD Allocation shall not apply to any Table A amounts transferred or exchanged with a SOD contractor.

That portion of SCWA's SWP Table A Water Available for export south of the Delta for any purpose shall be calculated as provided below:

$$\text{Water Available for Export} = (\text{SCWA's NOD Allocation AF} - \text{SCWA service area use AF}) \times \text{SOD Allocation / NOD Allocation}$$

- iv. The increase in allocated Table A due to the NOD Allocation shall not be sold through the turnback pool.
- 2. Advanced Table A Program:** DWR, upon the request of SCWA, will deliver to SCWA additional Project Water (referred to as "Advanced Table A"), over and above SCWA's NOD Allocation, and any other water supplies approved for transport through the North Bay Aqueduct, including, but not limited to Article 21 water, subject to the following limitations:
- a. Advanced Table A must be used in the SCWA service area (Solano County) and may not be transferred or exchanged.
 - b. Advanced Table A will be accounted for cumulatively from year to year to form a "Cumulative Advanced Table A Balance." SCWA's Cumulative Advanced Table A Balance shall not exceed 60,000 acre-feet except as provided below in sub-section 2.f below. Advanced Table A will be available after the May 1 Allocation is announced by DWR, subject to the limitations in sub-sections 2.e and 2.f below.
 - c. The Cumulative Advanced Table A Balance shall reset to zero each time that Oroville Reservoir begins flood control operations, or exceeds its allowed flood control capacity, or reaches its storage capacity (3.5 million acre-feet) as determined by DWR.
 - d. SCWA shall pay back towards any Advanced Table A Balance over 5 years old when its annual NOD Table A Allocation is in excess of 60%, with that portion of its NOD Table A Allocation that exceeds 60% in that year, unless the Advanced Table A Balance is reset that year as described in sub-section 2.c above. In all other years, SCWA may elect to pay back all or part of its Cumulative Advanced Table A Balance with any portion of its NOD Table A Allocation for that year.

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SCWA Agreement in Principle— May 7, 2012

- e. Advanced Table A will be available, up to the annual and cumulative amounts, in all years except those years in which the DWR Director is allocating water as required to meet minimum demands for domestic supply, fire protection or sanitation consistent with Article 18(a) of the SWP Contract. DWR must meet environmental requirements of the SWP mandated by law and subject to the discretion of the Director prior to allocation of Table A or Advanced Table A.
 - f. Conference Years are years when SOD Allocation is less than or equal to 20%. In Conference years, SCWA will not request Advanced Table A. However, for each Conference Year prior to a reset of “Cumulative Advanced Table A Balance” SCWA’s current Cumulative Advanced Table A Balance shall be temporarily increased by the lesser of 16,800 AF (equivalent of 40% of SCWA Table A of 42,000 AF, prior to a permanent transfer of Table A from the Kern County Water Agency) or by the remaining “Cumulative Advanced Table A Balance” for that year, until a reset occurs.
 - g. SCWA may only request and receive a maximum of 15,000 acre-feet of Advanced Table A in any year. SCWA may utilize additional Advanced Table A if Napa and Yuba City do not utilize their annual maximum annual Advanced Table A, up to a combined annual (SCWA, Napa and Yuba City) total of 27,500 acre feet and with the written permission of the party not utilizing their Advanced Table A.
 - h. Advanced Table A shall only be made available after full delivery of SCWA’s annual allocated Table A and any other Table A deferred or carried over from a previous year. Advanced Table A will not be made available if SCWA decides to carryover, exchange or store any portion of its allocated Table A amount outside its service area in that year.
 - i. Annual diversions of SCWA’s combined NOD Allocation and Advanced Table A shall not exceed 47,756 acre-feet in any year.
3. **Limitations on Additional Water Supplies:** Except as expressly provided for herein, in consideration of the mutual agreements contained in this settlement agreement, and for the term of the existing SWP Contract and any renewal thereof (including during or as a result of any contract extension negotiations), SCWA agrees to the following limitations:
- a. SCWA shall not claim any preference or priority under Article 18(a) of the existing SWP Contract.
 - b. SCWA shall not request or be entitled to receive a new or separate SWP Contract that will increase SCWA’s existing total maximum Table A amount, whether pursuant to Article 18(c) of its existing SWP Contract or any other legal authority, except as provided in sub-section 3.e below.
 - c. SCWA agrees to the following limitations on water right applications filed with the State Water Resources Control Board (“SWRCB”).

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SCWA Agreement in Principle— May 7, 2012

- i. Prior to January 1, 2037, SCWA shall not file a water right application with the SWRCB to meet existing or future demands within SCWA's service area.
- ii. If SCWA files a water rights application with the SWRCB, to meet existing or future demands within SCWA's service area after January 1, 2037, SCWA stipulates that any water right issued on such application will contain the following language:

No diversion is authorized by this permit when satisfaction of inbasin entitlements requires release of supplemental Project water by the Central Valley Project or the State Water Project.

1. Inbasin entitlements are defined as all rights to divert water from streams tributary to the Sacramento-San Joaquin Delta or the Delta for use within the respective basins of origin or the Legal Delta, unavoidable natural requirements for riparian habitat and conveyance losses, and flows required by the State Water Resources Control Board for maintenance of water quality and fish and wildlife. Export diversions and Project carriage water are specifically excluded from the definition of inbasin entitlements.
2. Supplemental Project water is defined as that water imported to the basin by the projects plus water released from Project storage which is in excess of export diversions, Project carriage water, and Project inbasin deliveries.

The SWRCB shall notify permittee of curtailment of diversion under this term after it finds that supplemental Project water has been released or will be released. The Board will advise permittee of the probability of imminent curtailment of diversion as far in advance as practicable based on anticipated requirements for supplemental Project water provided by the Project operators.

- d. SCWA agrees that any request to use SWP storage facilities shall be governed by Article 56 of the SWP Contract. SCWA agrees that it will not claim a preferential right to request or receive water stored in SWP facilities and will not claim a preferential right to request to contract for or utilize SWP storage facilities based on the Area of Origin or County of Origin laws or any other legal authority.
- e. The prohibition in sub-section 3.b and the time limit in sub-section 3.c shall not apply if a catastrophic event or Act of God causes a substantial failure in one or more of SCWA's existing or future water supplies intended to serve existing or future water demands within SCWA's service area.
- f. In the event that SCWA files a water right application as provided for in sub-sections 3.c and 3.e, or requests a new or separate state water contact to increase SCWA's existing total maximum Table A amount as provided for in sub-section 3.e, or SCWA's SWP Contract is no longer in effect, then:

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SCWA Agreement in Principle— May 7, 2012

- i. SCWA has not waived any claim of right associated with the Area of Origin or County of Origin laws, and
- ii. DWR and Intervenors have not waived any right to challenge or protest any such claims of right.
- g. The following member units of SCWA have also agreed to the limitations and waivers set forth in sub-section 3 as evidenced by a separate addendum to the Settlement Agreement to be executed by each of them: City of Benicia, City of Fairfield, City of Vallejo, City of Vacaville, City of Rio Vista, City of Suisun City, and City of Dixon.
- h. Nothing herein shall limit or prohibit SCWA from acquiring or purchasing SWP Table A amounts from another SWP Contractor. Any SWP Table A amounts acquired from a SOD contractor shall not be entitled to the NOD Allocation.

4. General Provisions

- a. Implementation of the provisions in this Agreement in Principle and resulting Settlement Agreement is subject to compliance with all environmental or other legal requirements mandated by law.
- b. If compliance with a legal mandate or the provisions of this agreement requires exercise of the Director's discretion, such discretion is expressly reserved.
- c. Consistent with Article 38 of the State Water Project contracts, where the terms of this Agreement in Principle provide for action to be based upon the opinion, approval, review, or determination of any party, such terms are not intended to be and shall never be construed as permitting such opinion, approval, review, or determination to be arbitrary, capricious, or unreasonable.
- d. Nothing in this Agreement in Principle or subsequent Settlement Agreement is precedent for any future action by DWR or any of the parties.
- e. Conditions precedent:
 - i. The parties agree to obtain a stay in *SCWA vs. DWR* until the other conditions precedent are met.
 - ii. DWR will process an amendment to each Plaintiff's SWP Contract under Article 45.
 - iii. DWR will act as the lead agency to comply with CEQA for implementing the Settlement Agreement and any resulting SWP Contract amendments.
 - iv. The Court must approve the Settlement Agreement. The parties agree to jointly request the Court's approval through a stipulated motion.
 - v. The Plaintiffs will dismiss with prejudice the First Amended Complaint filed on February 27, 2009. All parties agree that the only claims raised in the First

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SCWA Agreement in Principle— May 7, 2012

Amended Complaint are claims relating to the applicability of SWP Contract Article 18(a) shortages to Plaintiffs. While not addressed in the First Amended Complaint, the parties' agreements regarding Plaintiffs' claims of rights pursuant to Water Code Sections 11460 et seq. or Water Code Section 10505 that may exist independent of the SWP Contract, and claims of rights pursuant to Article 18(c) of the SWP Contract, are addressed in the limitations section of this Agreement in Principle at Section 3.

f. Remedies

- i. If SCWA or any of its member agencies files an application with the SWRCB prior to 2037 or requests an 18(c) contract except as allowed by sub-section 3.e, this is deemed a breach. DWR will hold all benefits for the breaching party in abeyance until they cure the breach by withdrawing the application or 18(c) contract request.
 - ii. Specific performance: if any party to the Agreement in Principle or Settlement Agreement, or member agency that has adopted provisions of the Agreement in Principle or Settlement through addendum, breaches, the parties agree that monetary damages alone would be insufficient. Any non-breaching party can request specific performance, including but not limited to injunctive relief, fourteen (14) days after providing notice of the alleged breach to other parties as provided in 4.f.iii, below.
 - iii. In the event of an alleged breach, the non-breaching party agrees to give notice of the alleged breach to all other parties to the Agreement and to consult with the parties for the purpose of attempting in good faith to resolve any disputes prior to the initiation of litigation or court proceedings.
 - iv. The use by the party or the State of any remedy specified herein for the enforcement of the Settlement Agreement is not exclusive and shall not deprive either from using any other remedy provided by law.
 - v. In any action by any of the parties to enforce or interpret the Settlement Agreement, the prevailing party is entitled to attorney fees and costs, including expert costs.
 - vi. If a Plaintiff breaches the Settlement Agreement, the limitation provisions in sub-section 3 will survive as against such Plaintiff.
- g. All parties bear their own fees and costs associated with *SCWA vs. DWR* or any challenges by any non-party to the Settlement Agreement and related implementing documents.

Mediation/Settlement Privileged & Confidential

**Resolution of *Solano County Water Agency et al., v. Department of Water Resources*
Sacramento County Superior Court Case No: 34-2008-00016338 CU-BC-GDS**

**Agreement in Principle for
Napa County Flood Control and Water Conservation District (“Napa”)**

May 7, 2012

Introduction

The negotiating teams for the parties in *Solano County Water Agency (“SCWA”) et al. v. DWR*, including the Plaintiffs¹, the State of California Department of Water Resources (“DWR”) and Intervenor², agree to recommend that their governing bodies and the State of California, respectively, authorize the use of the Agreements in Principle among the Plaintiffs, State of California, and Intervenor as the basis for completing Settlement Agreements for each plaintiff and the other parties to settle this case.

Each party spent significant time and effort seeking to resolve these issues, culminating in a final settlement conference on April 30, 2012. At that final settlement conference, the Negotiation Team for the Plaintiffs included representatives and legal counsel from SCWA, Napa, Yuba City, and Butte County. The Negotiation Team for the State of California included representatives and legal counsel from the Department of Water Resources and the California Attorney General’s Office. The Negotiation Team for the Intervenor included representatives from Kern County Water Agency, the Metropolitan Water District of Southern California, Coachella Valley Water District, and Alameda County Water District, and legal counsel representing all of the Intervenor.

The Agreement in Principle memorializes the key material terms of the proposed settlement reached among the Negotiating Teams for Plaintiffs, DWR, and Intervenor, as to Napa. This Agreement in Principle is part of a package of four individual Agreements in Principle, each one tailored for the individual Plaintiff, plus associated implementing documents.

The set of Agreements in Principle are not contracts or enforceable legal documents. Rather, the key material terms will be used by the parties’ attorneys to prepare the legal documents that will contain all of the terms and provisions of the four proposed Settlement Agreements to be signed by the Parties.

The implementation of the Settlement Agreements will be subject to and contingent upon, among other things, completion of any necessary environmental analysis and documentation, compliance with any required laws, regulations or permits, conducting any necessary public review, preparation of appropriate contract amendments, and any other necessary actions by the Parties.

¹ Solano County Water Agency (“SCWA”), Napa County Flood Control and Water Conservation District (“Napa”), City of Yuba City (“Yuba City”), and County of Butte (“Butte County”) (collectively “Plaintiffs”).

² The Intervenor consist of the following SWP Contractors: the Metropolitan Water District of Southern California, Alameda County Flood Control & Water Conservation District, Zone 7, Alameda County Water District, Antelope Valley-East Kern Water Agency, Castaic Lake Water Agency, Central Coast Water Authority, Coachella Valley Water District, Kern County Water Agency, Mojave Water Agency, Palmdale Water District, San Geronio Pass Water Agency, Santa Clara Valley Water District, and Tulare Lake Basin Water Storage District (collectively the “Intervenor”).

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Subject to the recitals above, the Parties agree to the following terms in principle:

1. North of Delta Allocation:

- a. **General:** DWR determines State Water Project (“SWP” or “Project”) Table A Allocations using existing SWP facility capacities, storage conditions, contractor requests, other demands for SWP water, operational and regulatory restrictions, available hydrologic forecast data, as well as other factors that may affect the available supply and the ability to deliver Project water. Each year that this Agreement is in effect, DWR shall calculate a separate SWP Table A Allocation for SCWA, Napa, and Yuba City (“the North of Delta (NOD) Contractors”), defined as the NOD Allocation.
- b. **Method:** DWR shall determine which operational or regulatory restrictions impact water availability to only the South of Delta (“SOD”) export facilities and which operational or regulatory restrictions have a system-wide impact on water availability to the Project in general. Operational or regulatory restrictions that impact water availability to only SOD export facilities shall not affect the NOD Allocation. Operational or regulatory restrictions that impact water availability to the Project in general shall affect the NOD Allocation based on an allocation of responsibility for each such restriction among the contractors.
- c. **Current Allocations:** Until the State Water Resources Control Board (“SWRCB”) changes D-1641 or Endangered Species Act (“ESA”) or other environmental or regulatory requirements affecting SWP operations, the parties agree that DWR’s current operations pursuant to SWRCB D-1641 impact system wide Table A Allocation capabilities of the SWP.

The parties also agree that while current operational requirements pursuant to the ESA impact mostly the SOD Table A Allocation, these ESA requirements also impact the NOD Table A Allocation to the extent that they impact Delta water quality or increase Delta outflow requirements of the SWP. DWR calculates an “Allocation Analysis” that is derived from model runs that are used to identify possible Table A Allocations. An example of this Analysis is attached hereto as Exhibit A.

The Allocation Analysis is updated as new information becomes available during the water year, usually monthly during the winter/spring season. One part of the current Allocation Analysis is a simulation of the SWP operating under D-1641. For the current NOD Allocation referenced in this subsection, that Analysis is expected to be used in the determination of the NOD Allocation.

- d. **Future Changes:** DWR will evaluate the extent to which new or different operational or regulatory restrictions affect the NOD Allocation and will consult with the SWP Contractors regarding the impact, if any, of the changed circumstances on the NOD Allocation method prior to implementation of any change.

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e. Other Conditions:

- i. Each NOD Contractor's SWP Table A Allocation shall not exceed that NOD Contractor's annual Table A amount contained in its SWP Contract.
- ii. The NOD Allocation shall not affect the ability of any NOD Contractor to participate in and benefit from future SWP facilities.
- iii. The NOD Allocation shall not apply to any Table A amounts or exchanged with a SOD contractor.

That portion of Napa's SWP Table A Water Available for export south of the Delta for any purpose shall be calculated as provided below:

$$\text{Water Available for Export} = (\text{Napa's NOD Allocation AF} - \text{Napa service area use AF}) \times \text{SOD Allocation} / \text{NOD Allocation}$$

- iv. The increase in allocated Table A due to the NOD Allocation shall not be sold through the turnback pool.
- 2. Advanced Table A Program:** DWR, upon the request of Napa, will deliver to Napa additional Project Water (referred to as "Advanced Table A"), over and above Napa's NOD Allocation, and any other water supplies approved for transport through the North Bay Aqueduct, including, but not limited to Article 21 water, subject to the following limitations:
- a. Advanced Table A must be used in the Napa service area and may not be transferred or exchanged.
 - b. Advanced Table A will be accounted for cumulatively from year to year to form a "Cumulative Advanced Table A Balance." Napa's Cumulative Advanced Table A Balance shall not exceed 29,600 acre-feet except as provided below in sub-section 2.f below. Advanced Table A will be available after the May 1 Allocation is announced by DWR, subject to the limitations in sub-sections 2.e and 2.f below.
 - c. The Cumulative Advanced Table A Balance shall reset to zero each time that Oroville Reservoir begins flood control operations, or exceeds its allowed flood control capacity, or reaches its storage capacity (3.5 million acre-feet) as determined by DWR.
 - d. Napa shall pay back towards any Advanced Table A Balance over 5 years old when its annual NOD Table A Allocation is in excess of 60%, with that portion of its NOD Table A Allocation that exceeds 60% in that year, unless the Advanced Table A Balance is reset that year as described in sub-section 2.c above. In all other years, Napa may elect to pay back all or part of its Cumulative Advanced Table A Balance with any portion of its NOD Table A Allocation for that year.
 - e. Advanced Table A will be available, up to the annual and cumulative amounts, in all years except those years in which the DWR Director is allocating water as required to meet minimum demands for domestic supply, fire protection or sanitation consistent with

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Article 18(a) of the SWP Contract. DWR must meet environmental requirements of the SWP mandated by law and subject to the discretion of the Director prior to allocation of Table A or Advanced Table A.

- f. Conference Years are years when SOD Allocation is less than or equal to 20%. In Conference years, Napa will not request more than 5,000 acre-feet of Advanced Table A, subject to the restrictions described in sub-section 2.e above.
 - g. Napa may only request and receive a maximum of 7,500 acre-feet of Advanced Table A in any year. Napa may utilize additional Advanced Table A if SCWA and Yuba City do not utilize their annual maximum annual Advanced Table A, up to a combined annual (SCWA, Napa and Yuba City) total of 27,500 acre feet and with the written permission of the party not utilizing their Advanced Table A.
 - h. Advanced Table A shall only be made available after full delivery of Napa's annual allocated Table A and any other Table A deferred or carried over from a previous year. Advanced Table A will not be made available if Napa decides to carryover, exchange or store any portion of its allocated Table A amount outside its service area in that year.
 - i. Annual diversions of Napa's combined NOD Allocation and Advanced Table A shall not exceed 29,025 acre-feet in any year.
3. **Limitations on Additional Water Supplies:** Except as expressly provided for herein, in consideration of the mutual agreements contained in this settlement agreement, and for the term of the existing SWP Contract and any renewal thereof (including during or as a result of any contract extension negotiations), Napa agrees to the following limitations:
- a. Napa shall not claim any preference or priority under Article 18(a) of the existing SWP Contract.
 - b. Napa shall not request or be entitled to receive a new or separate SWP Contract that will increase Napa's existing total maximum Table A amount, whether pursuant to Article 18(c) of its existing SWP Contract or any other legal authority, except as provided in sub-section 3.e below.
 - c. This sub-section deals with Napa (and its member agencies that sign the settlement) filing water rights applications to the State Water Resources Control Board ("SWRCB"). For the purposes of this Agreement in Principle and related Settlement Agreements, the Parties agree that any SWRCB applications for waters originating within the Napa River and Lake Berryessa watersheds are not subject to this sub-section. If Napa pursues a SWRCB application for water that originated outside the boundaries of those watersheds, the following provisions apply:

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- i. Prior to January 1, 2032, Napa shall not file a water right application with the SWRCB to meet existing or future demands within Napa's service area.
- ii. If Napa files a water rights application with the SWRCB, to meet existing or future demands within its service area after January 1, 2032, Napa stipulates that any water right issued on such application will contain the following language:

No diversion is authorized by this permit when satisfaction of in-basin entitlements requires release of supplemental Project water by the Central Valley Project or the State Water Project.

1. In-basin entitlements are defined as all rights to divert water from streams tributary to the Sacramento-San Joaquin Delta or the Delta for use within the respective basins of origin or the Legal Delta, unavoidable natural requirements for riparian habitat and conveyance losses, and flows required by the State Water Resources Control Board for maintenance of water quality and fish and wildlife. Export diversions and Project carriage water are specifically excluded from the definition of in-basin entitlements.
2. Supplemental Project water is defined as that water imported to the basin by the projects plus water released from Project storage which is in excess of export diversions, Project carriage water, and Project in-basin deliveries.

The SWRCB shall notify permittee of curtailment of diversion under this term after it finds that supplemental Project water has been released or will be released. The Board will advise permittee of the probability of imminent curtailment of diversion as far in advance as practicable based on anticipated requirements for supplemental Project water provided by the Project operators.

- d. Napa agrees that any request to use SWP storage facilities shall be governed by Article 56 of the SWP Contract. Napa agrees that it will not claim a preferential right to request or receive water stored in SWP facilities and will not claim a preferential right to request to contract for or utilize SWP storage facilities based on the Area of Origin or County of Origin laws or any other legal authority.
- e. The prohibition in sub-section 3.b and the time limit in sub-section 3.c shall not apply if a catastrophic event or Act of God causes a substantial failure in one or more of Napa's existing or future water supplies intended to serve existing or future water demands within Napa's service area.
- f. In the event that Napa files a water right application as provided for in sub-sections 3.c and 3.e, or requests a new or separate state water contact to increase Napa's existing total maximum Table A amount as provided for in sub-section 3.e, or Napa's SWP Contract is no longer in effect, then:

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- i. Napa has not waived any claim of right associated with the Area of Origin or County of Origin laws, and
 - ii. DWR and Intervenors have not waived any right to challenge or protest any such claims of right.
- a. The following member units of Napa have also agreed to the limitations and waivers set forth in this paragraph 3 as evidenced by a separate addendum to the Settlement Agreement to be executed by each of them: City of Napa, City of Calistoga and City of American Canyon.
 - g. Nothing herein shall limit or prohibit Napa from acquiring or purchasing SWP Table A amounts from another SWP Contractor. Any SWP Table A amounts acquired from a SOD contractor shall not be entitled to the NOD Allocation.

4. General Provisions

- a. Implementation of the provisions in this Agreement in Principle and resulting Settlement Agreement is subject to compliance with all environmental or other legal requirements mandated by law.
- b. If compliance with a legal mandate or the provisions of this agreement requires exercise of the Director's discretion, such discretion is expressly reserved.
- c. Consistent with Article 38 of the State Water Project contracts, where the terms of this Agreement in Principle provide for action to be based upon the opinion, approval, review, or determination of any party, such terms are not intended to be and shall never be construed as permitting such opinion, approval, review, or determination to be arbitrary, capricious, or unreasonable.
- d. Nothing in this Agreement in Principle or subsequent Settlement Agreement is precedent for any future action by DWR or any of the parties.
- e. Conditions precedent:
 - i. The parties agree to obtain a stay in *SCWA vs. DWR* until the other conditions precedent are met.
 - ii. DWR will process an amendment to each Plaintiff's SWP Contract under Article 45.
 - iii. DWR will act as the lead agency to comply with CEQA for implementing the Settlement Agreement and any resulting SWP Contract amendments.
 - iv. The Court must approve the Settlement Agreement. The parties agree to jointly request the Court's approval through a stipulated motion.

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- v. The Plaintiffs will dismiss with prejudice the First Amended Complaint filed on February 27, 2009. All parties agree that the only claims raised in the First Amended Complaint are claims relating to the applicability of SWP Contract Article 18(a) shortages to Plaintiffs. While not addressed in the First Amended Complaint, the parties' agreements regarding Plaintiffs' claims of rights pursuant to Water Code Sections 11460 et seq. or Water Code Section 10505 that may exist independent of the SWP Contract, and claims of rights pursuant to Article 18(c) of the SWP Contract, are addressed in the limitations section of this Agreement in Principle at Section 3.
- f. Remedies
 - i. If Napa or any of its member agencies files an application with the SWRCB prior to 2032 or requests an 18(c) contract except as allowed by sub-section 3.e, this is deemed a breach. DWR will hold all benefits for the breaching party in abeyance until they cure the breach by withdrawing the application or 18(c) contract request.
 - ii. Specific performance: if any party to the Agreement in Principle or Settlement Agreement, or member agency that has adopted provisions of the Agreement in Principle or Settlement through addendum, breaches, the parties agree that monetary damages alone would be insufficient. Any non-breaching party can request specific performance, including but not limited to injunctive relief, fourteen (14) days after providing notice of the alleged breach to other parties as provided in 4.f.iii, below.
 - iii. In the event of an alleged breach, the non-breaching party agrees to give notice of the alleged breach to all other parties to the Agreement and to consult with the parties for the purpose of attempting in good faith to resolve any disputes prior to the initiation of litigation or court proceedings.
 - iv. The use by the party or the State of any remedy specified herein for the enforcement of the Settlement Agreement is not exclusive and shall not deprive either from using any other remedy provided by law.
 - v. In any action by any of the parties to enforce or interpret the Settlement Agreement, the prevailing party is entitled to attorney fees and costs, including expert costs.
 - vi. If a Plaintiff breaches the Settlement Agreement, the limitation provisions in section 3 will survive as against such Plaintiff.
- g. All parties bear their own fees and costs associated with *SCWA vs. DWR* or any challenges by any non-party to the Settlement Agreement and related implementing documents.

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**Resolution of Solano County Water Agency et al., v. Department of Water Resources
Sacramento County Superior Court Case No: 34-2008-00016338 CU-BC-GDS**

**Agreement in Principle for
Yuba City**

May 7, 2012

Introduction

The negotiating teams for the parties in *Solano County Water Agency (“SCWA”) et al. v. DWR*, including the Plaintiffs¹, the State of California Department of Water Resources (“DWR”) and Intervenor², agree to recommend that their governing bodies and the State of California, respectively, authorize the use of the Agreements in Principle among the Plaintiffs, State of California, and Intervenor as the basis for completing Settlement Agreements for each plaintiff and the other parties to settle this case.

Each party spent significant time and effort seeking to resolve these issues, culminating in a final settlement conference on April 30, 2012. At that final settlement conference, the Negotiation Team for the Plaintiffs included representatives and legal counsel from SCWA, Napa, Yuba City, and Butte County. The Negotiation Team for the State of California included representatives and legal counsel from the Department of Water Resources and the California Attorney General’s Office. The Negotiation Team for the Intervenor included representatives from Kern County Water Agency, the Metropolitan Water District of Southern California, Coachella Valley Water District, and Alameda County Water District, and legal counsel representing all of the Intervenor.

The Agreement in Principle memorializes the key material terms of the proposed settlement reached among the Negotiating Teams for Plaintiffs, DWR, and Intervenor, as to the City of Yuba City. This Agreement in Principle is part of a package of four individual Agreements in Principle, each one tailored for the individual Plaintiff, plus associated implementing documents.

The set of Agreements in Principle are not contracts or enforceable legal documents. Rather, the key material terms will be used by the parties’ attorneys to prepare the legal documents that will contain all of the terms and provisions of the four proposed Settlement Agreements to be signed by the Parties.

The implementation of the Settlement Agreements will be subject to and contingent upon, among other things, completion of any necessary environmental analysis and documentation, compliance with any required laws, regulations or permits, conducting any necessary public review, preparation of appropriate contract amendments, and any other necessary actions by the Parties.

¹ Solano County Water Agency (“SCWA”), Napa County Flood Control and Water Conservation District (“Napa”), City of Yuba City (“Yuba City”), and County of Butte (“Butte County”) (collectively “Plaintiffs”).

² The Intervenor consist of the following SWP Contractors: the Metropolitan Water District of Southern California, Alameda County Flood Control & Water Conservation District, Zone 7, Alameda County Water District, Antelope Valley-East Kern Water Agency, Castaic Lake Water Agency, Central Coast Water Authority, Coachella Valley Water District, Kern County Water Agency, Mojave Water Agency, Palmdale Water District, San Geronio Pass Water Agency, Santa Clara Valley Water District, and Tulare Lake Basin Water Storage District (collectively the “Intervenor”).

Subject to the recitals above, the Parties agree to the following terms in principle:

1. North of Delta Allocation:

- a. **General:** DWR determines State Water Project (“SWP” or “Project”) Table A Allocations using existing SWP facility capacities, storage conditions, contractor requests, other demands for SWP water, operational and regulatory restrictions, available hydrologic forecast data, as well as other factors that may affect the available supply and the ability to deliver Project water. Each year that this Agreement is in effect, DWR shall calculate a separate SWP Table A Allocation for SCWA, Napa, and Yuba City (“the North of Delta (NOD) Contractors”), defined as the NOD Allocation.
- b. **Method:** DWR shall determine which operational or regulatory restrictions impact water availability to only the South of Delta (“SOD”) export facilities and which operational or regulatory restrictions have a system-wide impact on water availability to the Project in general. Operational or regulatory restrictions that impact water availability to only SOD export facilities shall not affect the NOD Allocation. Operational or regulatory restrictions that impact water availability to the Project in general shall affect the NOD Allocation based on an allocation of responsibility for each such restriction among the contractors.
- c. **Current Allocations:** Until the State Water Resources Control Board (“SWRCB”) changes D-1641 or Endangered Species Act (“ESA”) or other environmental or regulatory requirements affecting SWP operations, the parties agree that DWR’s current operations pursuant to SWRCB D-1641 impact system wide Table A Allocation capabilities of the SWP.

The parties also agree that while current operational requirements pursuant to the ESA impact mostly the SOD Table A Allocation, these ESA requirements also impact the NOD Table A Allocation to the extent that they impact Delta water quality or increase Delta outflow requirements of the SWP. DWR calculates an “Allocation Analysis” that is derived from model runs that are used to identify possible Table A Allocations. An example of this Analysis is attached hereto as Exhibit A.

The Allocation Analysis is updated as new information becomes available during the water year, usually monthly during the winter/spring season. One part of the current Allocation Analysis is a simulation of the SWP operating under D-1641. For the current NOD Allocation referenced in this subsection, that Analysis is expected to be used in the determination of the NOD Allocation.

- d. **Future Changes:** DWR will evaluate the extent to which new or different operational or regulatory restrictions affect the NOD Allocation and will consult with the SWP Contractors regarding the impact, if any, of the changed circumstances on the NOD Allocation method prior to implementation of any change.

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e. Other Conditions:

- i. Each NOD Contractor's SWP Table A Allocation shall not exceed that NOD Contractor's annual Table A amount contained in its SWP Contract.
- ii. The NOD Allocation shall not affect the ability of any NOD Contractor to participate in and benefit from future SWP facilities.
- iii. The NOD Allocation shall not apply to any Table A amounts or exchanged with a SOD contractor.

That portion of Yuba City's SWP Table A Water Available for export south of the Delta for any purpose shall be calculated as provided below:

$$\text{Water Available for Export} = (\text{Yuba City's NOD Allocation AF} - \text{Yuba City service area use AF}) \times \text{SOD Allocation} / \text{NOD Allocation}$$

- iv. The increase in allocated Table A due to the NOD Allocation shall not be sold through the turnback pool.

2. Advanced Table A Program: DWR, upon the request of Yuba City, will deliver to Yuba City additional Project Water (referred to as "Advanced Table A"), over and above Yuba City's NOD Allocation, and any other water supplies approved for transport through the North Bay Aqueduct, including, but not limited to Article 21 water, subject to the following limitations:

- a. Advanced Table A must be used in the Yuba City service area and may not be transferred or exchanged.
- b. Advanced Table A will be accounted for cumulatively from year to year to form a "Cumulative Advanced Table A Balance." Yuba City's Cumulative Advanced Table A Balance shall not exceed 20,000 acre-feet except as provided below in sub-section 2.f below. Advanced Table A will be available after the May 1 Allocation is announced by DWR, subject to the limitations in sub-sections 2.e and 2.f below.
- c. The Cumulative Advanced Table A Balance shall reset to zero each time that Oroville Reservoir begins flood control operations, or exceeds its allowed flood control capacity, or reaches its storage capacity (3.5 million acre-feet) as determined by DWR.
- d. Yuba City shall pay back towards any Advanced Table A Balance over 5 years old when its annual NOD Table A Allocation is in excess of 60%, with that portion of its NOD Table A Allocation that exceeds 60% in that year, unless the Advanced Table A Balance is reset that year as described in sub-section 2.c above. In all other years, Yuba City may elect to pay back all or part of its Cumulative Advanced Table A Balance with any portion of its NOD Table A Allocation for that year.
- e. Advanced Table A will be available, up to the annual and cumulative amounts, in all years except those years in which the DWR Director is allocating water as required to

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meet minimum demands for domestic supply, fire protection or sanitation consistent with Article 18(a) of the SWP Contract. DWR must meet environmental requirements of the SWP mandated by law and subject to the discretion of the Director prior to allocation of Table A or Advanced Table A.

- f. Conference Years are years when SOD Allocation is less than or equal to 20%. In Conference years, Yuba City will not request more than 5,000 acre-feet of Advanced Table A, subject to the restrictions described in sub-section 2.e above.
 - g. Yuba City may only request and receive a maximum of 5,000 acre-feet of Advanced Table A in any year. Yuba City may utilize additional Advanced Table A if Napa and SCWA do not utilize their annual maximum annual Advanced Table A, up to a cumulative (SCWA, Napa and Yuba City) total of 27,500 acre feet and with the written permission of the party not utilizing their Advanced Table A.
 - h. Advanced Table A shall only be made available after full delivery of Yuba City's annual allocated Table A and any other Table A deferred or carried over from a previous year. Advanced Table A will not be made available if Yuba City decides to carryover, exchange or store any portion of its allocated Table A amount outside its service area in that year.
 - i. Annual diversions of Yuba City's combined NOD Allocation and Advanced Table A shall not exceed 9,600 acre-feet in any year.
3. **Limitations on Additional Water Supplies:** Except as expressly provided for herein, in consideration of the mutual agreements contained in this settlement agreement, and for the term of the existing SWP Contract and any renewal thereof (including during or as a result of any contract extension negotiations), Yuba City agrees to the following limitations:
- a. Yuba City shall not claim any preference or priority under Article 18(a) of the existing SWP Contract.
 - b. Yuba City shall not request or be entitled to receive a new or separate SWP Contract that will increase Yuba City's existing total maximum Table A amount, whether pursuant to Article 18(c) of its existing SWP Contract or any other legal authority, except as provided in sub-section 3.e below.
 - c. This sub-section deals with Yuba City (and its member agencies that sign the settlement) filing water rights applications to the State Water Resources Control Board ("SWRCB").
 - i. Prior to January 1, 2027, Yuba City shall not file a water right application with the SWRCB to meet existing or future demands within Yuba City's service area.
 - ii. If Yuba City files a water rights application with the SWRCB, to meet existing or future demands within its service area after January 1, 2027, Yuba City stipulates that any water right issued on such application will contain the following language:

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No diversion is authorized by this permit when satisfaction of in-basin entitlements requires release of supplemental Project water by the Central Valley Project or the State Water Project.

1. In-basin entitlements are defined as all rights to divert water from streams tributary to the Sacramento-San Joaquin Delta or the Delta for use within the respective basins of origin or the Legal Delta, unavoidable natural requirements for riparian habitat and conveyance losses, and flows required by the State Water Resources Control Board for maintenance of water quality and fish and wildlife. Export diversions and Project carriage water are specifically excluded from the definition of in-basin entitlements.
2. Supplemental Project water is defined as that water imported to the basin by the projects plus water released from Project storage which is in excess of export diversions, Project carriage water, and Project in-basin deliveries.

The SWRCB shall notify permittee of curtailment of diversion under this term after it finds that supplemental Project water has been released or will be released. The Board will advise permittee of the probability of imminent curtailment of diversion as far in advance as practicable based on anticipated requirements for supplemental Project water provided by the Project operators.

- d. Yuba City agrees that any request to use SWP storage facilities shall be governed by Article 56 of the SWP Contract. Yuba City agrees that it will not claim a preferential right to request or receive water stored in SWP facilities and will not claim a preferential right to request to contract for or utilize SWP storage facilities based on the Area of Origin or County of Origin laws or any other legal authority.
- e. The prohibition in sub-section 3.b and the time limit in sub-section 3.c shall not apply if a catastrophic event or Act of God causes a substantial failure in one or more of Yuba City's existing or future water supplies intended to serve existing or future water demands within Yuba City's service area.
- f. In the event that Yuba City files a water right application as provided for in sub-sections 3.c and 3.e, or requests a new or separate state water contact to increase Yuba City's existing total maximum Table A amount as provided for in sub-section 3.e, or Yuba City's SWP Contract is no longer in effect, then:
 - i. Yuba City has not waived any claim of right associated with the Area of Origin or County of Origin laws, and
 - ii. DWR and Intervenors have not waived any right to challenge or protest any such claims of right.

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- g. Nothing herein shall limit or prohibit Yuba City from acquiring or purchasing SWP Table A amounts from another SWP Contractor. Any SWP Table A amounts acquired from a SOD contractor shall not be entitled to the NOD Allocation.

4. Article 45(i): DWR and Yuba City agree that Article 45(i) of Yuba City's SWP Contract shall be interpreted in accordance with the letter attached hereto as Exhibit B.

5. General Provisions

- a. Implementation of the provisions in this Agreement in Principle and resulting Settlement Agreement is subject to compliance with all environmental or other legal requirements mandated by law.
- b. If compliance with a legal mandate or the provisions of this agreement requires exercise of the Director's discretion, such discretion is expressly reserved.
- c. Consistent with Article 38 of the State Water Project contracts, where the terms of this Agreement in Principle provide for action to be based upon the opinion, approval, review, or determination of any party, such terms are not intended to be and shall never be construed as permitting such opinion, approval, review, or determination to be arbitrary, capricious, or unreasonable.
- d. Nothing in this Agreement in Principle or subsequent Settlement Agreement is precedent for any future action by DWR or any of the parties.
- e. Conditions precedent:
 - i. The parties agree to obtain a stay in *SCWA vs. DWR* until the other conditions precedent are met.
 - ii. DWR will process an amendment to each Plaintiff's SWP Contract under Article 45.
 - iii. DWR will act as the lead agency to comply with CEQA for implementing the Settlement Agreement and any resulting SWP Contract amendments.
 - iv. The Court must approve the Settlement Agreement. The parties agree to jointly request the Court's approval through a stipulated motion.
 - v. The Plaintiffs will dismiss with prejudice the First Amended Complaint filed on February 27, 2009. All parties agree that the only claims raised in the First Amended Complaint are claims relating to the applicability of SWP Contract Article 18(a) shortages to Plaintiffs. While not addressed in the First Amended Complaint, the parties' agreements regarding Plaintiffs' claims of rights pursuant to Water Code Sections 11460 et seq. or Water Code Section 10505 that may exist independent of the SWP Contract, and claims of rights pursuant to Article 18(c) of the SWP Contract, are addressed in the limitations section of this Agreement in Principle at Section 3.

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- f. Remedies
- i. If Yuba City files an application with the SWRCB prior to 2027 or requests an 18(c) contract except as allowed by sub-section 3.e, this is deemed a breach. DWR will hold all benefits for the breaching party in abeyance until they cure the breach by withdrawing the application or 18(c) contract request.
 - ii. Specific performance: if any party to the Agreement in Principle or Settlement Agreement, or member agency that has adopted provisions of the Agreement in Principle or Settlement through addendum, breaches, the parties agree that monetary damages alone would be insufficient. Any non-breaching party can request specific performance, including but not limited to injunctive relief, fourteen (14) days after providing notice of the alleged breach to other parties as provided in 4.f.iii, below.
 - iii. In the event of an alleged breach, the non-breaching party agrees to give notice of the alleged breach to all other parties to the Agreement and to consult with the parties for the purpose of attempting in good faith to resolve any disputes prior to the initiation of litigation or court proceedings.
 - iv. The use by the party or the State of any remedy specified herein for the enforcement of the Settlement Agreement is not exclusive and shall not deprive either from using any other remedy provided by law.
 - v. In any action by any of the parties to enforce or interpret the Settlement Agreement, the prevailing party is entitled to attorney fees and costs, including expert costs.
 - vi. If a Plaintiff breaches the Settlement Agreement, the limitation provisions in section 3 will survive as against such Plaintiff.
- g. All parties bear their own fees and costs associated with *SCWA vs. DWR* or any challenges by any non-party to the Settlement Agreement and related implementing documents.

Mediation/Settlement Privileged & Confidential

**Resolution of *Solano County Water Agency et al., v. Department of Water Resources*
Sacramento County Superior Court Case No: 34-2008-00016338 CU-BC-GDS**

**Agreement in Principle for
Butte County**

May 7, 2012

Introduction

The negotiating teams for the parties in *Solano County Water Agency (“SCWA”) et al. v. DWR*, including the Plaintiffs¹, the State of California Department of Water Resources (“DWR”) and Intervenors,² agree to recommend that their governing bodies and the State of California, respectively, authorize the use of the Agreements in Principle among the Plaintiffs, State of California, and Intervenors as the basis for completing Settlement Agreements for each plaintiff and the other parties to settle this case.

Each party spent significant time and effort seeking to resolve these issues, culminating in a final settlement conference on April 30, 2012. At that final settlement conference, the Negotiation Team for the Plaintiffs included representatives and legal counsel from SCWA, Napa, Yuba City, and Butte County. The Negotiation Team for the State of California included representatives and legal counsel from the Department of Water Resources and the California Attorney General’s Office. The Negotiation Team for the Intervenors included representatives from Kern County Water Agency, the Metropolitan Water District of Southern California, Coachella Valley Water District, and Alameda County Water District, and legal counsel representing all of the Intervenors.

The Agreement in Principle memorializes the key material terms of the proposed settlement reached among the Negotiating Teams for Plaintiffs, DWR, and Intervenors, as to Butte County. This Agreement in Principle is part of a package of four individual Agreements in Principle, each one tailored for the individual Plaintiff, plus associated implementing documents.

The set of Agreements in Principle are not contracts or enforceable legal documents. Rather, the key material terms will be used by the parties’ attorneys to prepare the legal documents that will contain all of the terms and provisions of the four proposed Settlement Agreements to be signed by the Parties.

The implementation of the Settlement Agreements will be subject to and contingent upon, among other things, completion of any necessary environmental analysis and documentation, compliance with any required laws, regulations or permits, conducting any necessary public review, preparation of appropriate contract amendments, and any other necessary actions by the Parties.

¹ Solano County Water Agency (“SCWA”), Napa County Flood Control and Water Conservation District (“Napa”), City of Yuba City (“Yuba City”), and County of Butte (“Butte County”) (collectively “Plaintiffs”).

² The Intervenors consist of the following SWP Contractors: the Metropolitan Water District of Southern California, Alameda County Flood Control & Water Conservation District, Zone 7, Alameda County Water District, Antelope Valley-East Kern Water Agency, Castaic Lake Water Agency, Central Coast Water Authority, Coachella Valley Water District, Kern County Water Agency, Mojave Water Agency, Palmdale Water District, San Geronio Pass Water Agency, Santa Clara Valley Water District, and Tulare Lake Basin Water Storage District (collectively the “Intervenors”).

Subject to the recitals above, the Parties agree to the following terms in principle:

1. **Butte County Allocation:**

- a. DWR shall allocate Butte County’s Table A, for in-county use only, according to the following “BC Table”.

Butte County (“BC”) Table

	SOD ALLOCATION (%)	BUTTE COUNTY ALLOCATION (AF)
Conference Years SOD = 0 to 20%	0	3,000
	5	3,000
	10	4,000
	15	5,000
	20	6,000
SOD = 21 to 100% Butte County Allocation = SOD + 30% until 60%, then 100% thereafter	25	15,125
	30	16,500
	35	17,875
	40	19,250
	45	20,625
	50	22,000
	55	23,375
	60	27,500
	65	27,500
	70	27,500
	75	27,500
	80	27,500
	85	27,500
	90	27,500
	95	27,500
100	27,500	

- b. Any out-of-Butte County use of Butte County’s Table A by way of transfer, exchange, lease or storage shall be subject to the allocation of the entity receiving the water, not the BC Table.
- c. A "Conference Year" is a year in which the South of Delta (“SOD”) water allocation is equal to or less than 20% for the entire calendar year.
- d. The BC Table in sub-section 1.a uses SOD Allocations divisible by 5. In the event that the SOD Allocation is not divisible by 5, DWR shall interpolate the BC in the manner illustrated in this example:

Example: Assume the SOD Allocation is 39%. To interpolate between 35% and 40% to get an allocation of 39%:

$$\begin{array}{rcl}
 35\% = 17,875 & 40\% = 19,250 & 39\% = ? \\
 39\% = 17,875 + (4/5)(19,250 - 17,875) & & = \mathbf{18,975}
 \end{array}$$

- e. If Butte County's actual future in-county demands are more than the amount specified in the above BC Table for Conference Years, Butte County shall be able to request that the Director supply Butte County's minimum demands under the provision in Article 18(a) of the SWP Contract which allows the State to "apportion on some other basis such is required to meet minimum demands for domestic supply, fire protection or sanitation".
- f. Butte County's in-county use shall be limited to 27,500 AF minus the Maximum Leased Table A Amount (see sub-section 2 below) and minus any DWR approved reduction of Butte County Table A pursuant to Article 7(a). For example, Butte County has contracted for the lease of 24,000 AF beginning in 2012 (see sub-section 2.f below) with no Table A reduction under Article 7(a). In-County use for the duration of these long-term lease agreements would be limited to 3,500 AF absent any DWR approved Article 7(a) reduction.

2. Butte County Lease Provisions

- a. **Long Term Lease:** Butte County will be allowed to lease the unused portion of its Maximum Table A Amount to other SWP contractor(s) for a minimum of 5 years, referred to as Maximum Leased Table A Amount, with an option to extend. These leases may continue to the extent the leased water is not needed to meet in-county demands subject to the limitations below.
- b. **Retention of Table A Amounts:** The Maximum Leased Table A Amount will be retained in Butte County's SWP Contract and Butte County will continue to pay the annual SWP charges to DWR for the Maximum Table A Amount.

c. General Lease Provisions

- i. The annual allocated amount of leased water , referred to as Annual Leased Table A Allocated Amount, shall be determined as the Maximum Lease Table A Amount times the lessee's allocation percentage. For example, assume:

$$\begin{array}{rcl}
 \text{Maximum Leased Table A Amount} & = & 24,000 \text{ AF} \\
 \text{SOD Lessee and SOD Allocation} & = & 25\% \\
 \text{Given these assumptions, then:} & & \\
 \text{Annual Leased Table A Allocated Amount} & = & 24,000 \times 0.25 = 6,000 \text{ AF}
 \end{array}$$

- ii. Consistent with past practice, DWR shall not be obligated to deliver the leased water at such times when delivery of water would adversely impact SWP operations, facilities, or other SWP contractors.
- iii. Annual Leased Table A Allocated Amount may be scheduled with DWR in a manner similar to the lessee's Table A and will be applicable when considering priorities under Article 12(f) and implementation of Article 21.

- iv. The Maximum Leased Table A Amount will not be part of the lessee's Water Supply Contract water as it relates to conservation storage provided under Article 56(c), or Article 12(e) nor as it is related to rescheduled water provided under Article 14(b).
 - v. The Maximum Leased Table A Amount will not be subject to retroactive or prospective transportation minimum and capital charges.
 - vi. No long-term lease can be initiated prior to completion of CEQA compliance for any long-term lease.
- d. **DWR Facilitation of Leases:** Pursuant to this Agreement in Principle and the resulting Settlement Agreements, DWR will help facilitate Butte County in Table A leases between Butte County and other SWP contractor(s).
- e. **Precedent:** The above lease provisions are uniquely tied to the settlement of a bona fide legal dispute and are not to be construed as a precedent for or against any other future leases.
- f. **Current Lease Agreements:** Butte County has negotiated lease agreements with Palmdale Water District and the Westside Districts for the lease of a portion of Butte County's annual Table A amount for up to ten years beginning in 2012. DWR has agreed to approve the leases for 2012 and 2013 subject to completion of CEQA compliance for the leases, and signature on the Agreements in Principle by all Plaintiffs in *SCWA v. DWR*. DWR's approval of the leases herein for the years 2014 through 2021 shall be subject to the approval of the Settlement Agreement by all parties to *SCWA v. DWR* and its implementation.
- 3. Limitations on Additional Water Supplies:** Except as expressly provided for herein, and in consideration of the mutual agreements contained in this settlement agreement, for the duration of the existing SWP Contract or any renewal thereof, including any contract extension negotiations, Butte County agrees to the following limitations:
- a. Butte County shall not claim any preference or priority under Article 18(a) of the existing SWP Contract between Butte County and the State of California.
 - b. After January 1, 2027, Butte County may request an amended SWP Contract to increase Butte County's existing total maximum Table A amounts, pursuant to Article 18(c) of its existing SWP long-term water supply contract, provided the following conditions are met:
 - i. Butte County will give DWR five years advance notice of its decision to request an increase in its maximum Table A amount. During the five year period, Butte County will need to demonstrate that it has fully contracted, with water purveyors in Butte County, its maximum Table A amount for use within its service area.
 - ii. Butte County's existing Table A amount and the additional Table A amount must be for use within Butte County's service area.
 - iii. As of the effective date of the requested increase, no Table A water, including the original Table A amount, is being leased outside Butte County except through the turnback pool.

- iv. Butte County pays all retroactive and prospective charges for the additional Table A amount like those that would be applied to other contractors seeking the same contract.
 - v. The formulas set forth in the BC Table shall be proportionately applied to the increased Table A amount.
- c. Prior to January 1, 2027, Butte County shall not file a water rights application with the State Water Resources Control Board (“SWRCB”) to meet the existing or future water demands within Butte County's service area. Butte County is an inbasin user. Should Butte County file an application after January 1, 2027, and be issued a water right by the SWRCB, Butte County would have, if determined by the SWRCB, an inbasin entitlement. Butte County stipulates that it will not claim a preferential right to use SWP storage under that application or to obtain a storage right or the right to stored water in any SWP storage facility. Butte County further stipulates that any water right issued on such application will provide that when the SWRCB has provided notice that Term 91 is in effect, Butte County shall not be entitled to divert water from streams tributary to the Sacramento-San Joaquin Delta while Term 91 remains in effect.
- d. Butte County shall not claim under the Area-of-Origin or County-of-Origin laws, or any other legal authority, a preferential right to water stored in SWP facilities or a preferential right to contract for the use of SWP storage facilities.
- e. The time limitations in sub-sections 3.b and 3.c shall not apply if a catastrophic event or Act of God causes a substantial failure in one or more of Butte County's existing or future water supplies intended to serve existing or future water demands within Butte's service area.
- f. Nothing herein shall limit or prohibit Butte County from acquiring or purchasing SWP Table A amounts from another SWP Contractor. Any SWP Table A amounts acquired from another SWP contractor shall retain the allocation associated with the original contractor.
- g. In the event that Butte County files a water right application as provided for in sub-sections 3.c and 3.e, or requests a new or separate state water contact to increase Butte County's existing total maximum Table A amount as provided for in sub-section 3.b and 3.e, or Butte County's SWP Contract is no longer in effect, then:
- i. Butte County has not waived any claim of right associated with the Area of Origin or County of Origin laws, and
 - ii. DWR and Intervenors have not waived any right to challenge or protest any such claims of right.

4. General Provisions

- a. Implementation of the provisions in this Agreement in Principle and resulting Settlement Agreement is subject to compliance with all environmental or other legal requirements mandated by law.

- b. If compliance with a legal mandate or the provisions of this agreement requires exercise of the Director's discretion, such discretion is expressly reserved.
- c. Consistent with Article 38 of the State Water Project contracts, where the terms of this Agreement in Principle provide for action to be based upon the opinion, approval, review, or determination of any party, such terms are not intended to be and shall never be construed as permitting such opinion, approval, review, or determination to be arbitrary, capricious, or unreasonable.
- d. Nothing in this Agreement in Principle or subsequent Settlement Agreement is precedent for any future action by DWR or any of the parties.
- e. Conditions precedent:
 - i. The parties agree to obtain a stay in *SCWA vs. DWR* until the other conditions precedent are met.
 - ii. DWR will process an amendment to each Plaintiff's SWP Contract under Article 45.
 - iii. DWR will act as the lead agency to comply with CEQA for implementing the Settlement Agreement and any resulting SWP Contract amendments.
 - iv. The Court must approve the Settlement Agreement. The parties agree to jointly request the Court's approval through a stipulated motion.
 - v. The Plaintiffs will dismiss with prejudice the First Amended Complaint filed on February 27, 2009. All parties agree that the only claims raised in the First Amended Complaint are claims relating to the applicability of SWP Contract Article 18(a) shortages to Plaintiffs. While not addressed in the First Amended Complaint, the parties' agreements regarding Plaintiffs' claims of rights pursuant to Water Code Sections 11460 et seq. or Water Code Section 10505 that may exist independent of the SWP Contract, and claims of rights pursuant to Article 18(c) of the SWP Contract, are addressed in the limitations section of this Agreement in Principle at Section 3.
- f. Remedies
 - i. If Butte County files an application to the SWRCB prior to 2027 or requests an Article 18(c) contract prior to 2027, except as allowed by sub-section 3.e, this is deemed a breach. DWR will hold all benefits for the breaching party in abeyance until it cures the breach by withdrawing the application or 18(c) contract request.
 - ii. Specific performance: if any party to the Agreement in Principle or Settlement Agreement, or member agency who has adopted provisions of the Agreement in Principle or Settlement through addendum, breaches, the parties agree that monetary damages alone would be insufficient. Any non-breaching party can request specific performance, including but not limited to injunctive relief, fourteen (14) days after providing notice of the alleged breach to the other parties as provided in 4.f.iii., below.

- iii. In the event of an alleged breach, the non-breaching party agrees to give notice of the alleged breach to all other parties to the Agreement and to consult with the parties for the purpose of attempting in good faith to resolve any disputes prior to the initiation of litigation or court proceedings.
 - iv. The use by the party or the State of any remedy specified herein for the enforcement of the Settlement Agreement is not exclusive and shall not deprive either from using any other remedy provided by law.
 - v. In any action by any of the parties to enforce or interpret the Settlement Agreement, the prevailing party is entitled to attorney fees and costs, including expert costs.
 - vi. If a Plaintiff breaches the Settlement Agreement, the limitation provisions in section 3 will survive as against such Plaintiff.
- g. All parties bear their own fees and costs associated with *SCWA vs. DWR* or any challenges by any non-party to the Settlement Agreement and related implementing documents.

Mediation/Settlement Privileged & Confidential

**Resolution of Solano County Water Agency et al., v. Department of Water Resources
Sacramento County Superior Court Case No: 34-2008-00016338 CU-BC-GDS**

May 7, 2012

The following agree to the substance of the attached set of Agreements in Principle, based on negotiations occurring on April 30, 2012. Approval of final Settlement Agreements is subject to drafting of final settlement agreements and official action to execute the Settlement Agreements.

Plaintiffs:

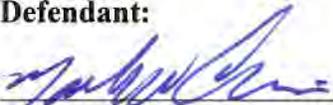
Solano County Water Agency Date

Napa County Flood Control Date
and Water Conservation District

City of Yuba City Date

Butte County Date

Defendant:



California Department of 8/31/12
Water Resources Date

Intervenors:

Metropolitan Water District of Date
Southern California

Alameda County Flood Control Date
& Water Conservation District, Zone 7

Alameda County Water District Date

Antelope Valley-East Kern Date
Water Agency

Castaic Lake Water Agency Date

Central Coast Water Authority Date

Coachella Valley Water District Date

Kern County Water Agency Date

Mojave Water Agency

Date

Palmdale Water District

Date

San Geronio Pass Water
Agency

Date

Santa Clara Valley Water
District

Date

Tulare Lake Basin Water
Storage District

Date

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Plaintiffs:

Solano County Water Agency Date

Napa County Flood Control Date
and Water Conservation District

City of Yuba City Date

Steve Lambert 5/8/12

Butte County Date

Defendant:

California Department of Date
Water Resources

Intervenors:

Metropolitan Water District of Date
Southern California

Alameda County Flood Control Date
& Water Conservation District, Zone 7

Alameda County Water District Date

Antelope Valley-East Kern Date
Water Agency

Castaic Lake Water Agency Date

Central Coast Water Authority Date

Coachella Valley Water District Date

Kern County Water Agency Date

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Solano County Water Agency Date



Napa County Flood Control Date
and Water Conservation District

City of Yuba City Date

Butte County Date

Defendant:

California Department of Date
Water Resources

Intervenors:

Metropolitan Water District of Date
Southern California

Alameda County Flood Control Date
& Water Conservation District, Zone 7

Alameda County Water District Date

Antelope Valley-East Kern Date
Water Agency

Castaic Lake Water Agency Date

Central Coast Water Authority Date

Coachella Valley Water District Date

Kern County Water Agency Date

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Plaintiffs:

RE Bishop 5/10/12
Solano County Water Agency Date

Napa County Flood Control Date
and Water Conservation District

City of Yuba City Date

Butte County Date

Defendant:

California Department of Date
Water Resources

Intervenors:

Metropolitan Water District of Date
Southern California

Alameda County Flood Control Date
& Water Conservation District, Zone 7

Alameda County Water District Date

Antelope Valley-East Kern Date
Water Agency

Castaic Lake Water Agency Date

Central Coast Water Authority Date

Coachella Valley Water District Date

Kern County Water Agency Date

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Plaintiffs:

_____ Solano County Water Agency	_____ Date	_____ Napa County Flood Control and Water Conservation District	_____ Date
 _____ City of Yuba City	5/15/12 _____ Date	_____ Butte County	_____ Date

Defendant:

California Department of
Water Resources

Date

Intervenors:

_____ Metropolitan Water District of Southern California	_____ Date	_____ Alameda County Flood Control & Water Conservation District, Zone 7	_____ Date
_____ Alameda County Water District	_____ Date	_____ Antelope Valley-East Kern Water Agency	_____ Date
_____ Castaic Lake Water Agency	_____ Date	_____ Central Coast Water Authority	_____ Date
_____ Coachella Valley Water District	_____ Date	_____ Kern County Water Agency	_____ Date

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Napa County Flood Control Date
and Water Conservation District

City of Yuba City Date

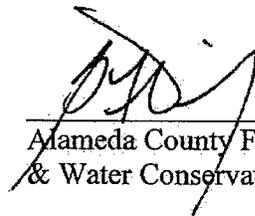
Butte County Date

Defendant:

California Department of Date
Water Resources

Intervenors:

Metropolitan Water District of Date
Southern California

 _____ ^{26.6.12} Date
Alameda County Flood Control
& Water Conservation District, Zone 7

Alameda County Water District Date

Antelope Valley-East Kern Date
Water Agency

Castaic Lake Water Agency Date

Central Coast Water Authority Date

Coachella Valley Water District Date

Kern County Water Agency Date

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and Water Conservation District

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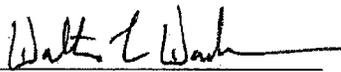
Defendant:

California Department of Date
Water Resources

Intervenors:

Metropolitan Water District of Date
Southern California

Alameda County Flood Control Date
& Water Conservation District, Zone 7

 5/30/12

Alameda County Water District Date

Antelope Valley-East Kern Date
Water Agency

Castaic Lake Water Agency Date

Central Coast Water Authority Date

Coachella Valley Water District Date

Kern County Water Agency Date

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<u>Solano County Water Agency</u>	<u>Date</u>	<u>Napa County Flood Control and Water Conservation District</u>	<u>Date</u>
<u>City of Yuba City</u>	<u>Date</u>	<u>Butte County</u>	<u>Date</u>

Defendant:

<u>California Department of Water Resources</u>	<u>Date</u>
---	-------------

Intervenors:

<u>Metropolitan Water District of Southern California</u>	<u>Date</u>	<u>Alameda County Flood Control & Water Conservation District, Zone 7</u>	<u>Date</u>
<u>Alameda County Water District</u>	<u>Date</u>	 <u>Antelope Valley-East Kern Water Agency</u>	<u>6/26/2012</u> <u>Date</u>
<u>Castaic Lake Water Agency</u>	<u>Date</u>	<u>Central Coast Water Authority</u>	<u>Date</u>
<u>Coachella Valley Water District</u>	<u>Date</u>	<u>Kern County Water Agency</u>	<u>Date</u>

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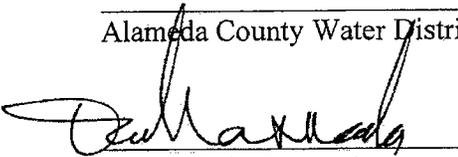
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_____ City of Yuba City	_____ Date	_____ Butte County	_____ Date

Defendant:

_____ California Department of Water Resources	_____ Date
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_____ Alameda County Water District	_____ Date	_____ Antelope Valley-East Kern Water Agency	_____ Date
 _____ Castaic Lake Water Agency	6/14/12 _____ Date	_____ Central Coast Water Authority	_____ Date
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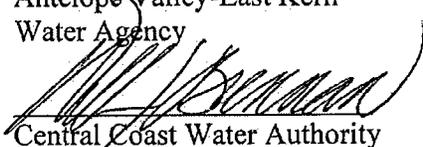
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Defendant:

_____ California Department of Water Resources	_____ Date
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_____ Castaic Lake Water Agency	_____ Date	 Central Coast Water Authority	_____ Date 5/18/12
_____ Coachella Valley Water District	_____ Date	_____ Kern County Water Agency	_____ Date

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City of Yuba City Date

Butte County Date

Defendant:

California Department of Date
Water Resources

Intervenors:

Metropolitan Water District of Date
Southern California

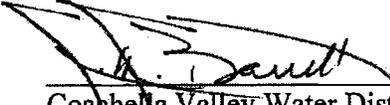
Alameda County Flood Control Date
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Alameda County Water District Date

Antelope Valley-East Kern Date
Water Agency

Castaic Lake Water Agency Date

Central Coast Water Authority Date



Coachella Valley Water District Date

Kern County Water Agency Date

J.M. FARRETT
ASST. GENERAL MANAGER

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Plaintiffs:

<u>Solano County Water Agency</u>	<u>Date</u>	<u>Napa County Flood Control and Water Conservation District</u>	<u>Date</u>
<u>City of Yuba City</u>	<u>Date</u>	<u>Butte County</u>	<u>Date</u>

Defendant:

<u>California Department of Water Resources</u>	<u>Date</u>
---	-------------

Intervenor:

<u>Metropolitan Water District of Southern California</u>	<u>Date</u>	<u>Alameda County Flood Control & Water Conservation District, Zone 7</u>	<u>Date</u>
<u>Alameda County Water District</u>	<u>Date</u>	<u>Antelope Valley-East Kern Water Agency</u>	<u>Date</u>
<u>Castaic Lake Water Agency</u>	<u>Date</u>	<u>Central Coast Water Authority</u>	<u>Date</u>
<u>Coachella Valley Water District</u>	<u>Date</u>	<u><i>J. M. Bl</i></u> <u>Kern County Water Agency</u>	<u><i>6/5/12</i></u> <u>Date</u>

Mediation/Settlement Privileged & Confidential

**Resolution of Solano County Water Agency et al., v. Department of Water Resources
Sacramento County Superior Court Case No: 34-2008-00016338 CU-BC-GDS**

May 7, 2012

The following agree to the substance of the attached set of Agreements in Principle, based on negotiations occurring on April 30, 2012. Approval of final Settlement Agreements is subject to drafting of final settlement agreements and official action to execute the Settlement Agreements.

Plaintiffs:

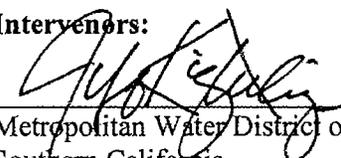
_____ Solano County Water Agency	_____ Date	_____ Napa County Flood Control and Water Conservation District	_____ Date
_____ City of Yuba City	_____ Date	_____ Butte County	_____ Date

Defendant:

California Department of
Water Resources

Date

Intervenors:

 _____ Metropolitan Water District of Southern California	<u>6/6/12</u> _____ Date	_____ Alameda County Flood Control & Water Conservation District, Zone 7	_____ Date
_____ Alameda County Water District	_____ Date	_____ Antelope Valley-East Kern Water Agency	_____ Date
_____ Castaic Lake Water Agency	_____ Date	_____ Central Coast Water Authority	_____ Date
_____ Coachella Valley Water District	_____ Date	_____ Kern County Water Agency	_____ Date

Mojave Water Agency Date

Denis D. LaMurray 5/23/12
Palmdale Water District Date

San Geronio Pass Water Agency Date

Santa Clara Valley Water District Date

Tulare Lake Basin Water Storage District Date

Mojave Water Agency

Date

Palmdale Water District

Date

J. Key W. Davis

San Geronimo Pass Water
Agency

6-1-12

Date

Santa Clara Valley Water
District

Date

Tulare Lake Basin Water
Storage District

Date

Mojave Water Agency

Date

Palmdale Water District

Date

San Geronio Pass Water Agency

Date

Anthony J. Fulcher
Santa Clara Valley Water District

6/12/12
Date

Tulare Lake Basin Water Storage District

Date

Mojave Water Agency

Date

Palmdale Water District

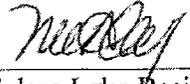
Date

San Geronio Pass Water
Agency

Date

Santa Clara Valley Water
District

Date


Tulare Lake Basin Water
Storage District

6/5/2012
Date

Mediation/Settlement Privileged & Confidential

**Resolution of *Solano County Water Agency et al., v. Department of Water Resources*
Sacramento County Superior Court Case No: 34-2008-00016338 CU-BC-GDS**

**Exhibit A for Agreements in Principle for
SCWA, Napa and Yuba City**

May 7, 2012

Allocation Analysis for 2012 (TAF)
WY 2012 based on April Water Supply Forecast

	2011	2012												Total (MAF)	Possible Table A %
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
50% Exceedence (90% Fall) D1641		D			SRI = 10.6			SVI = 6.4			Possible 2012 Table A Delivery =			3.091	74%
Oroville EOM Storage	2545	2545	2533	2943	3221	3173	2921	2533	2056	1757	1579	1462	1445	-	
Feather R. release (avg. cfs)	4460	1760	2520	1810	1510	1460	3190	5510	7710	5780	4000	2490	1760	-	
SWP Banks PP exports	318	303	109	154	133	84	165	236	383	371	166	245	265	2.614	
<i>Potential South of Delta Art. 21 Water Avail.</i>	0	150	0	273	80	0	0	0	0	0	0	0	0	0.503	
SWP San Luis EOM Storage	964	1062	1054	1062	1062	881	647	444	396	374	235	235	317	-	
SWP Contractor Deliveries	274	181	127	40	119	224	386	428	422	390	316	258	192	3.084	
50% Exceedence (90% Fall) Most Restrictive OMR		D			SRI = 10.6			SVI = 6.4			Possible 2012 Table A Delivery =			2.639	
Oroville EOM Storage	2545	2545	2533	2943	3221	3173	3021	2466	1999	1701	1523	1406	1389	-	
Feather R. release (avg. cfs)	4460	1760	2520	1810	1510	1460	1510	8230	7550	5760	4000	2490	1760	-	
SWP Banks PP exports	318	228	104	90	63	42	41	415	413	401	166	245	265	2.473	
<i>Potential South of Delta Art. 21 Water Avail.</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	
SWP San Luis EOM Storage	964	997	974	1001	927	723	409	436	474	539	448	488	600	-	
SWP Contractor Deliveries	274	181	127	68	123	205	341	375	365	331	267	218	162	2.762	
50% Exceedence (90% Fall) Mod Restrictive OMR		D			SRI = 10.6			SVI = 6.4			Possible 2012 Table A Delivery =			2.706	65%
Oroville EOM Storage	2545	2545	2533	2943	3221	3173	3021	2466	1970	1672	1494	1377	1360	-	
Feather R. release (avg. cfs)	4460	1760	2520	1810	1510	1460	1510	8230	8020	5760	4000	2490	1760	-	
SWP Banks PP exports	318	228	104	90	87	84	70	415	413	401	166	245	236	2.539	
<i>Potential South of Delta Art. 21 Water Avail.</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	
SWP San Luis EOM Storage	964	997	974	1001	948	781	487	503	531	587	488	522	600	-	
SWP Contractor Deliveries	274	181	127	68	126	210	351	386	375	341	274	224	167	2.829	
50% Exceedence (90% Fall) Least Restrictive OMR		D			SRI = 10.6			SVI = 6.4			Possible 2012 Table A Delivery =			2.714	
Oroville EOM Storage	2545	2545	2533	2943	3221	3173	2933	2440	1963	1665	1487	1370	1353	-	
Feather R. release (avg. cfs)	4460	1760	2520	1810	1510	1460	2990	7220	7710	5760	4000	2490	1760	-	
SWP Banks PP exports	318	228	104	90	87	84	151	349	413	401	166	245	228	2.546	
<i>Potential South of Delta Art. 21 Water Avail.</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	
SWP San Luis EOM Storage	964	997	974	1001	948	780	566	515	542	597	497	530	600	-	
SWP Contractor Deliveries	274	181	127	68	126	211	352	387	376	342	275	225	168	2.837	
90% Exceedence (90% Fall) D1641		D			SRI = 9.5			SVI = 6.0			Possible 2012 Table A Delivery =			2.839	68%
Oroville EOM Storage	2545	2545	2533	2943	3202	3106	2891	2440	1928	1695	1545	1429	1442	-	
Feather R. release (avg. cfs)	4460	1760	2430	1810	1510	2130	2390	5660	7350	4550	3550	2490	1250	-	
SWP Banks PP exports	318	303	109	154	124	65	60	266	392	256	164	244	230	2.367	
<i>Potential South of Delta Art. 21 Water Avail.</i>	0	150	0	273	50	0	0	0	0	0	0	0	0	0.473	
SWP San Luis EOM Storage	964	1062	1054	1062	1062	882	579	444	444	342	229	252	317	-	
SWP Contractor Deliveries	274	181	127	40	110	203	350	389	383	354	286	234	174	2.832	
90% Exceedence (90% Fall) Most Restrictive OMR		D			SRI = 9.5			SVI = 6.0			Possible 2012 Table A Delivery =			2.445	
Oroville EOM Storage	2545	2545	2533	2943	3202	3129	2933	2358	1850	1598	1448	1332	1345	-	
Feather R. release (avg. cfs)	4460	1760	2430	1810	1510	1760	2070	7680	7290	4870	3550	2490	1250	-	
SWP Banks PP exports	318	228	104	90	63	42	41	398	396	283	164	244	230	2.283	
<i>Potential South of Delta Art. 21 Water Avail.</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	
SWP San Luis EOM Storage	964	997	974	1001	934	745	458	498	548	523	452	509	600	-	
SWP Contractor Deliveries	274	181	127	68	117	189	313	345	335	304	244	199	148	2.568	
90% Exceedence (90% Fall) Mod Restrictive OMR		D			SRI = 9.5			SVI = 6.0			Possible 2012 Table A Delivery =			2.465	59%
Oroville EOM Storage	2545	2545	2533	2943	3202	3106	2884	2352	1844	1604	1454	1338	1351	-	
Feather R. release (avg. cfs)	4460	1760	2430	1810	1510	2130	2500	6980	7290	4670	3550	2490	1250	-	
SWP Banks PP exports	318	228	104	90	87	65	67	356	396	271	164	244	230	2.302	
<i>Potential South of Delta Art. 21 Water Avail.</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	
SWP San Luis EOM Storage	964	997	974	1001	957	790	526	521	569	529	456	511	600	-	
SWP Contractor Deliveries	274	181	127	68	117	190	316	348	338	306	246	201	150	2.588	
90% Exceedence (90% Fall) Least Restrictive OMR		D			SRI = 9.5			SVI = 6.0			Possible 2012 Table A Delivery =			2.465	
Oroville EOM Storage	2545	2545	2533	2943	3202	3106	2802	2352	1844	1604	1454	1338	1351	-	
Feather R. release (avg. cfs)	4460	1760	2430	1810	1510	2130	3880	5640	7290	4670	3550	2490	1250	-	
SWP Banks PP exports	318	228	104	90	87	65	149	274	396	271	164	244	230	2.302	
<i>Potential South of Delta Art. 21 Water Avail.</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0.000	
SWP San Luis EOM Storage	964	997	974	1001	957	790	608	521	569	529	456	511	600	-	
SWP Contractor Deliveries	274	181	127	68	117	190	316	348	338	306	246	201	150	2.588	

Assumptions for 2012 Allocation Analysis

Notes:

- Deliveries based on SWPAO's 2012 60% delivery file.
- 100% FRSA delivery assumed for all forecasts.
- Probability of exceedence is based on April Water Supply Forecast.
- Delivery of half of the Lower Yuba River Accord Component 1 water is assumed in all the OMR cases.
- Determination of Biological Opinions' (BiOp) impacts at the export facilities - SWP and CVP will share available water evenly under the BiOp restrictions.
- D1641 cases include the estimated costs associated with operating to the 2008 USFWS BiOp for Delta Smelt, 2009 NMFS BiOp for Salmonids and the 2010 DFG Longfin Incidental Take

Estimated Delivery in Details

	(1)	(2)	(3)	(4)	(1+3-2)	(1+2+4)	(1+3+4)
	'12 Table A	Txfr Adj	'12-'13 ANTCO	'11 CO & Others	2012 Allocation	2012 Delivery	Total Water Available for '12
50% Exceedence (90% Fall) D1641	2.816 maf	0.000 maf	0.275 maf	0.268 maf	3.091 maf	3.084 maf	3.359 maf
50% Exceedence (90% Fall) Most Restrictive OMR	2.364 maf	0.000 maf	0.275 maf	0.398 maf	2.639 maf	2.762 maf	3.037 maf
50% Exceedence (90% Fall) Mod Restrictive OMR	2.431 maf	0.000 maf	0.275 maf	0.398 maf	2.706 maf	2.829 maf	3.104 maf
50% Exceedence (90% Fall) Least Restrictive OMR	2.439 maf	0.000 maf	0.275 maf	0.398 maf	2.714 maf	2.837 maf	3.112 maf
90% Exceedence (90% Fall) D1641	2.564 maf	0.000 maf	0.275 maf	0.268 maf	2.839 maf	2.832 maf	3.107 maf
90% Exceedence (90% Fall) Most Restrictive OMR	2.170 maf	0.000 maf	0.275 maf	0.398 maf	2.445 maf	2.568 maf	2.843 maf
90% Exceedence (90% Fall) Mod Restrictive OMR	2.190 maf	0.000 maf	0.275 maf	0.398 maf	2.465 maf	2.588 maf	2.863 maf
90% Exceedence (90% Fall) Least Restrictive OMR	2.190 maf	0.000 maf	0.275 maf	0.398 maf	2.465 maf	2.588 maf	2.863 maf

Reservoir Targets

- Lake Oroville storage target = 1.000 MAF + "F" x (3.045 MAF - 1.000 MAF) on September 30; where "F" = 1/2 x Possible Table A %.

Exceedence	Possible Table A	Storage Target
50% Exceedence (90% Fall) D1641	74%	1.76 MAF
50% Exceedence (90% Fall) Most Restrictive OMR	63%	1.65 MAF
50% Exceedence (90% Fall) Mod Restrictive OMR	65%	1.66 MAF
50% Exceedence (90% Fall) Least Restrictive OMR	65%	1.67 MAF
90% Exceedence (90% Fall) D1641	68%	1.70 MAF
90% Exceedence (90% Fall) Most Restrictive OMR	59%	1.60 MAF
90% Exceedence (90% Fall) Mod Restrictive OMR	59%	1.60 MAF
90% Exceedence (90% Fall) Least Restrictive OMR	59%	1.60 MAF

- SWP San Luis storage targets for 2012

Exceedence	Deadpool = Total
All	42 taf

- Fall Storage Level (OMR cases only)
 >>>> for the 50% and 90% Exceedences

	Deadpool	'12-'13 ANTCO =	Required Storage
Oct-12	42 taf	186 taf	228 >>> 1/3 of '12-'13 ANTCO is available in Oct. '12
Nov-12	42 taf	372 taf	414 >>> 2/3 of '12-'13 ANTCO is available in Nov. '12
Dec-12	42 taf	558 taf	600 >>> 100% of '12-'13 ANTCO is available in Dec. '12

- Fall Storage Level (D1641 cases only)
 >>>> for the 50% and 90% Exceedences

	Deadpool	'12-'13 ANTCO =	Required Storage
Oct-12	42 taf	92 taf	134 >>> 1/3 of '12-'13 ANTCO is available in Oct. '12
Nov-12	42 taf	183 taf	225 >>> 2/3 of '12-'13 ANTCO is available in Nov. '12
Dec-12	42 taf	275 taf	317 >>> 100% of '12-'13 ANTCO is available in Dec. '12

OMR Assumptions

	Most Restrictive OMR	Moderate OMR	Least Restrictive OMR
January	-1250	-3500	-5000
February	-1250	-3500	-5000
March	-1250	-2000	-5000
April	-1250	-2000	-3500
May	-1250	-2000	-5000
June	-1250	-2500	-5000
December 1-17	-2000		
December 18-31	-1250	-2000	-5000

* Targets in accordance with the USFWS Delta Smelt BO, NMFS Salmon BO and the Longfin Incidental Take Permit.

Confidential / Mediation and Settlement Privileged
May 3, 2012

DRAFT

Mr. Steve Jepsen
City Administrator
City of Yuba City
1201 Civic Center Boulevard
Yuba City, CA 95993-3005

Dear Mr. Jepsen:

The Department of Water Resources (Department) has been in discussions with the City of Yuba City (City) over the City's use of its turnout, located on the Feather River, and how this use relates to Article 45(i) of the City's Long-Term Water Supply Contract with the Department for State Water Project water (Contract). In these discussions, both the Department and the City have considered the following: the City's status as an original SWP Contractor; the City's diversions from the Feather River and proximity to the Oroville facility; the City's historic delivery schedule; the City's small impact on the SWP system; and the City's request in relation to the settlement of the *SCWA v. DWR* litigation.

Having considered all of the above, the Department, in consultation with SWP Contractors, finds that the City's request will not materially impact other SWP Contractors and therefore approves the City's use of its turnout at a rate of 60 cubic feet per second (CFS), but not more than the City's Table A allocation amount, plus any other supplies approved by the Department for delivery to City, including, but not limited to, Table A water deferred or carried over from a previous year in accordance with Articles 12(e), 14(b) and 56(c), Article 21 water, and any Advanced Table A water requested by the City in accordance with the settlement agreement between the City and the Department in the *SCWA v. DWR* litigation. The use by the City of its turnout as described is subject to all other terms of the Contract and the settlement agreement. Nothing herein shall be used as a precedent for other requests for similar operational flexibility.

The provisions of this letter will be in effect upon approval of the settlement agreement between the City and the Department. However, the provisions of this letter will be withdrawn, revoked, or terminated, if the settlement agreement between the City and the Department terminates for any reason.

Please continue to provide your water delivery requests, with any updates, to the Department, Attn: Water Delivery Analysis and Documentation Branch, State Water Project Analysis Office.

Sincerely,

Mark Cowin
Department of Water Resources

**EXHIBIT B – EXAMPLE MAXIMUM BC TABLE AMOUNT
AVAILABLE FOR LEASE**

Exhibit B Table Example Maximum BC Table Amount Available for Lease				
(1) Table A SOD Allocation (%)	(2) Existing Conditions (Table A Allocation) (af)	(3) BC Table Allocation (af)	(4) Maximum BC Table Amount Available for In- County Use (af)	(5) Maximum Amount Available for Lease (af)
0	0	3,000	3,000	0
5	1,375	3,000	3,000	1,200
10	2,750	4,000	3,500	2,400
15	4,125	5,000	3,500	3,600
20	5,500	6,000	3,500	4,800
25	6,875	15,125	3,500	6,000
30	8,250	16,500	3,500	7,200
35	9,625	17,875	3,500	8,400
40	11,000	19,250	3,500	9,600
45	12,375	20,625	3,500	10,800
50	13,750	22,000	3,500	12,000
55	15,125	23,375	3,500	13,200
60	16,500	27,500	3,500	14,400
65	17,875	27,500	3,500	15,600
70	19,250	27,500	3,500	16,800
75	20,625	27,500	3,500	18,000
80	22,000	27,500	3,500	19,200
85	23,375	27,500	3,500	20,400
90	24,750	27,500	3,500	21,600
95	26,125	27,500	3,500	22,800
100	27,500	27,500	3,500	24,000

Notes: af = acre-feet; BC = Butte County.

Notwithstanding the amounts reflected in Column 5 above, the Maximum BC Table Amount Available for lease will be adjusted to zero in and during any year that the DWR Director allocates water pursuant to Article 18(a) of the State Water Project (SWP) Contract to meet minimum demands for domestic supply, fire protection, or sanitation. Any use of Butte County’s Table A outside of Butte County by way of transfer, exchange, lease, or storage shall be subject to the allocation of the entity receiving the water, not the BC Table allocation, and all leases of water referenced herein are governed by Sections 2.3 and 2.4 of the Agreement in Principle. All water allocated to Butte County using the BC Table allocation shall

be used only in Butte County's service area, and delivery and scheduling of such water shall be in accordance with Articles 10 and 12 of its Water Supply Contract.

Exhibit B Table provides an example of the maximum amount of Butte County's Table A that would be available for lease for a given Butte County in-county use. Column 1 lists the range of possible SWP allocations to South-of-Delta (SOD) contractors and assumes the current SWP SOD allocation methodology. Column 2 shows the corresponding Butte County Table A Allocation, assuming a given SWP allocation percentage in Column 1. Column 3 is the allocation for Butte County as identified in Section 2.2 of the Agreement in Principle. Column 4 is an example of Butte County's maximum in-county use; in this case, it is assumed to be 3,500 af, as discussed below. However, when the Table A SOD Allocation is 5% or less under Column 1, this amount would be limited to 3,000 af pursuant to the BC Allocation Table, which is also the value in Column 4. The Maximum Leased Table A Amount to be leased to SOD contractors is 24,000 af. However, the amount that is made available in any single year for lease cannot exceed Column 3 minus the amount that Butte County uses to meet its in-county needs. The assumed 3,500-af in-county use amount consists of a current in-county contracted demand of 2,668 af and 832 af of water that is held in reserve. The Agreement in Principle enables Butte County to lease a portion of its Table A Amount to other SWP contractors. Butte County has entered into agreements for the lease of 14,000 af to the Westside Districts in the San Joaquin Valley that currently receive SWP water and 10,000 af to Palmdale Water District in 2014–2021 with options for multiple 5-year extensions thereafter.

The maximum amount leased may be above or below 24,000 af each year, depending upon the in-county demand and the SOD allocation for that year. Column 5 is an example of the maximum amount that can be leased based on the SOD allocation in Column 1 and the maximum in-county use of either 3,000 af or 3,500 af in Column 4. If Butte County's actual demand is lower than its maximum in-county use (for example, lower than 3,500 af) in any year, the unused amount would be available to add to the Maximum Lease amount in that year. For example, in 2012 and 2013, the actual maximum in-county use is 2,668 af, allowing for a temporary increase of 832 af to the Maximum Leased Table A Amount, or 24,832 af total. Using the allocation shown in the Exhibit B Table and assuming a 3,500-af in-county contract amount and a 40% SOD allocation, a total of 9,600 af ($24,000 \text{ af} * 40\%$) would be delivered to SOD contractors. However, if the actual in-county use is only 2,668 af, the corresponding Maximum Lease Table A Amount is adjusted to 24,832 af ($24,000 \text{ af} + [3,500 \text{ af} - 2,668 \text{ af}]$). The amount available for delivery to Butte County's SOD lessees would be 9,932.80 af ($24,832 \text{ af} * 40\%$).

APPENDIX B

DWR Consistency Determination and Energy Consumption and
GHG Emission Estimates

DWR GHG Emissions Reduction Plan Consistency Determination Form For Projects Using Only DWR Staff and Equipment



This form is to be used by DWR project managers to document a DWR CEQA project's consistency with the DWR Greenhouse Gas Emissions Reduction Plan. This form is to be used only when DWR is the Lead Agency and when only DWR staff and equipment are used to implement the project.

California Department of Water Resources
1416 9th Street
Sacramento, CA 95814
dwrclimatechange.water.ca.gov
www.water.ca.gov/climatechange

Additional Guidance on filling out this form can be found at:
dwrclimatechange.water.ca.gov/guidance_resources.cfm

The DWR Greenhouse Gas Emissions Reduction Plan can be accessed at:
<http://www.water.ca.gov/climatechange/CAP.cfm>

Project Name:	State Water Project Supply Allocation Settlement Agreement
Environmental Document type:	Initial Study/Negative Declaration
Manager's Name:	Ted Alvarez
Manager's email:	alvarez@water.ca.gov
Division:	State Water Project Analysis Office
Office, Branch, or Field Division	

Short Project Description:

The proposed project would increase the allowable water supply that could be provided to North of Delta water contractors from the State Water Project (SWP). The current allowable water supply limits for Solano County Water Authority, Napa County, and Yuba City would be increased based on the North of Delta (NOD) Allocation formula. In addition, the proposed project would establish an Advanced Table A that would provide supplemental water supplies to these three water contractors when demand exceeds other SWP water supplies. The current allowable water supply limits for Butte County would be increased based on a new Butte County Allocation formula. In no case would any contractor's supply exceed its maximum contracted amount of water (known as the Table A Amount).

Project GHG Emissions Summary

All emissions from the project will occur as ongoing operational, maintenance, or business activity emissions and therefore have already been accounted for and analyzed in the GGERP. (This box must be checked if you are using this form. If you cannot check this box you must use the form at this [link](#))

Project GHG Reduction Plan Checklist

All Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project. ([Project Level GHG Emissions Reduction Measures](#))

Or

All feasible Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project and Measures not incorporated have been listed and determined not to apply to the proposed project (include as an attachment)

Project does not conflict with any of the Specific Action GHG Emissions Reduction Measures
([Specific Action GHG Emissions Reduction Measures](#))

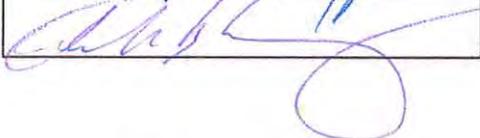
Would implementation of the project result in additional energy demands on the SWP system of 15 GWh/yr or greater?
 Yes No

If you answered Yes, attach a Renewable Power Procurement Plan update approval letter from the DWR SWP Power and Risk Office.

Is there substantial evidence that the effects of the proposed project may be cumulatively considerable notwithstanding the proposed project's compliance with the requirements of the DWR GHG Reduction Plan?
 Yes No

If you answered Yes, the project is not eligible for streamlined analysis of GHG emissions using the DWR GHG Emissions Reduction Plan. (See CEQA Guidelines, section 15183.5, subdivision (b)(2).)

Based on the information provided above and information provided in associated environmental documentation completed pursuant to the above referenced project, the DWR CEQA Climate Change Committee has determined that the proposed project is consistent with the DWR Greenhouse Gas Reduction Plan and the greenhouse gasses emitted by the project are covered by the plan's analysis.

Project Manager Signature:		Date:	<input type="text" value="3/4/13"/>
C4 Approval Signature:		Date:	<input type="text" value="3/12/13"/>

Attachments:

- List and Explanation of excluded Project Level GHG Emissions Reduction Measures
- Plan to update Renewable Energy Procurement Plan from DWR SWP Power and Risk Office

**North of Delta State Water Project Water Supply Contractors
Water Supply Changes - Electricity Changes**

Maximum

North of Delta		Table A		Table A + ATA		Table A		Table A + ATA		
Year Type	Existing Table A Deliveries	Proposed Table A Deliveries	Change in Deliveries	Proposed A + ATA Deliveries	Change in Deliveries	Energy Intensity (kWh/AF)	Electricity Change (MWh/yr)	Emissions (MT CO ₂ e)	Electricity Change (MWh/yr)	Emissions (MT CO ₂ e)
Average	56,041	68,872	12,831	77,211	21,170	278	3,571	1,071.15	5,892	1,767.31
Wet	73,992	88,184	14,192	88,974	14,982	278	3,950	1,184.77	4,170	1,250.72
Above Normal	65,448	85,068	19,620	85,568	20,120	278	5,461	1,637.91	5,600	1,679.65
Below Normal	58,656	79,346	20,690	82,616	23,960	278	5,759	1,727.24	6,669	2,000.22
Dry	43,115	50,540	7,425	70,604	27,489	278	2,067	619.85	7,651	2,294.83
Critical	24,855	27,463	2,608	47,671	22,816	278	726	217.72	6,350	1,904.72

South of Delta

Year Type	Existing Table A Deliveries	Proposed Table A Deliveries	Change in Deliveries	Energy Intensity (kWh/AF)	Electricity Change (MWh/yr)	Emissions (MT CO ₂ e)
Average	2,266,329	2,266,361	32	604	19	5.80
Wet	2,803,590	2,803,781	191	604	115	34.62
Above Normal	2,524,127	2,514,823	-9,304	604	-5,622	(1,686.17)
Below Normal	2,361,681	2,361,260	-421	604	-254	(76.30)
Dry	1,980,232	1,983,695	3,463	604	2,092	627.60
Critical	1,183,847	1,187,476	3,629	604	2,193	657.69

Emission Factors

Pollutant	GWP	Emission Factor	Units
CO2	1	658.68	lb/MWh
CH4	25	0.02894	lb/MWh
N2O	298	0.00617	lb/MWh
CO2e		661.24	lb/MWh

Sources

GWP http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html
 Electricity http://www.epa.gov/cleanenergy/documents/egridzips/eGRID2012V1_0_year09_GHGOutputrates.pdf

**North of Delta State Water Project Water Supply Contractors
Water Supply Changes - Electricity Changes**

Pumping Plant	At Plant (kWh/AF)	Cumulative from Delta
Barker Slough	223	223
Cordelia-Benicia	434	657
Cordelia-Vallejo	178	401
Cordelia-Napa	563	786
Harvey O. Banks (Delta)	296	296
South Bay (including Del Valle)	869	1165
Dos Amigos	138	434
Buena Vista	242	676
Teerink	295	971
Chrisman	639	1610
Edmonston	2236	3846
Pearblossom	703	4549
Greenspot	871	5420
Crafton Hills	1087	6507
Cherry Valley	224	6731
Oso	280	4126
Las Perillas	77	511
Badger Hill	200	711
Devil's Den	705	1416
Bluestone	705	2121
Polonio Pass	705	2826
Average	556	2,190

Average NOD Electricity Demand
278

Average SOD Electricity Demand
604

Table 7: Bulletin 132 Appendix B

DWR Specific Action GHG Emission Reduction Measures

1. **OP-1 Reid Gardner Power Termination:** The proposed project would not affect DWR terminating ownership of Unit #4 of Reid Gardner Power Station. Although the proposed project would require additional electricity, the increased demand would not require DWR to continue use of the Reid Gardner Power Station and could be provided by in-state and less GHG-intensive power sources.
2. **OP-2 Energy Efficiency Improvements:** The proposed project would not affect any infrastructure where energy efficiency improvements could be implemented. Although additional water would be conveyed to the North of Delta water suppliers, no pumps or pipelines would be impacted as a result of the proposed project.
3. **OP-3 Renewable Energy Procurement Plan:** The proposed project would not affect renewable energy procurement. However, the increased demand of water conveyance would benefit from future procurement of renewable electricity procurement. The proposed project would not hamper the procurement of future renewable energy resources.
4. **OP-4 On-Site Renewable Generation:** The proposed project would not include any infrastructure improvements or changes, including renewable energy generation and would not hamper the development of future DWR on-site renewable energy generation.
5. **OP-5 Lower Emissions Energy Resources:** The proposed project would not include any energy contracts or change the ownership of any energy resources and would not hamper the development of contracts or ownership of lower emissions energy resources.
6. **BP-1 SMUD Commercial Greenergy Program:** The proposed project would not adversely affect the SMUD Commercial Greenergy Program.
7. **BP-2 SMUD Carbon Offset Program:** The proposed project would not adversely affect the SMUD Carbon Offset Program.
8. **BP-3 DWR Sustainability Initiatives:** The proposed project would not include any changes to business practices or water conveyance infrastructure where sustainability initiatives could be implemented.

DWR Project-Level GHG Emission Reduction Measures

1. **CO-2 Statewide Equipment and Fuel Regulations:** The proposed project would not generate any direct air quality or GHG emissions. Any future regulations that may apply to the proposed project would be implemented via the electricity resources (e.g., power plants, renewable resources) used to power the proposed project.

APPENDIX C

Comments Received on the Initial Study/Proposed Negative Declaration



United States Department of the Interior

Letter 1

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

IN REPLY REFER TO:

MP-460

AUG 19 2013

Mr. Ted Alvarez, Supervising Engineer
California Department of Water Resources
State Water Project Analysis Office
1416 Ninth Street, Room 1620
Sacramento, CA 95814

Subject: Notice of Intent to Adopt an Initial Study/Negative Declaration for the State Water Project Supply Allocation Settlement Agreement

Dear Mr. Alvarez:

The Bureau of Reclamation (Reclamation) is providing comments on the Initial Study/Negative Declaration for the State Water Project Supply Allocation Settlement Agreement (Initial Study). For several reasons, a Negative Declaration is insufficient compliance with the California Environmental Quality Act (CEQA) and an analysis of potential impacts to Reclamation is required.

The California Department of Water Resources (DWR) and Reclamation own and operate the State Water Project (SWP) and Central Valley Project (CVP), respectively. For decades, DWR and Reclamation have shared responsibilities for implementing objectives in the Water Quality Control Plan for the Sacramento and San Joaquin River/San Francisco Bay Delta (Delta) adopted by the State Water Resources Control Board (Board). The Board has recognized the need for formal coordinated operation of the SWP and CVP in multiple water right proceedings. In 1986, DWR and Reclamation formalized the coordinated operation of the SWP and CVP in a Coordinated Operations Agreement (COA). DWR and Reclamation have not modified or amended the COA, although base assumptions and real time operations have changed due to changes in Delta objectives, addition of SWP facilities, the Monterey Agreement, the Central Valley Project Improvement Act, and the Endangered Species Act (ESA).

In 2010, north of Delta CVP contractors sued Reclamation under the California Water Code's area of origin statutes (Water Code § 11460 et. seq.), claiming that these statutes gave them a priority for deliveries of CVP water over deliveries to out-of-basin CVP contractors. The United States Court for the Eastern District of California found that area-of-origin statutes do not give in-basin water contractors a preference for CVP water over out-of-basin contractors; rather area-of-origin statutes allow area-of-origin parties to obtain superior water rights to the CVP and SWP should these parties apply to the Board for a water right. The District Court's judgement was affirmed by the 9th Circuit Court of Appeals. See *Tehama-Colusa Canal Auth. v. U.S. Dep't of Interior*, 819 F. Supp.2d 956 (E.D. Cal. 2011); affirmed by *Tehama-Colusa Canal Auth. v. U.S. Dep't of Interior*, 2013 U.S. App. LEXIS 13417 (9th Cir. 2013).

Reclamation believes the principle established in this case is crucial to the protection of the SWP and CVP, as in summer periods natural flows are insufficient to meet Sacramento-Valley in-basin demands (defined in the COA as legal uses of water in the Sacramento Basin including the water required under provisions of Exhibit A [Delta flow requirements set by the State Water Resources Control Board]) and stored supplies are therefore crucial to meeting these in-basin demands. Increasing the quantities of COA-defined “in-basin demands” affects the demands on storage of both the CVP and the SWP.

1A

As presented, the Initial Study does not correctly identify the role of the COA in defining the relationship of SWP and CVP storage to North-of-Delta water service contracts. In the COA, the SWP and CVP north of Delta contractors are part of the defined “in-basin” demand. This in-basin demand is shared between SWP and CVP storage supplies, with 25% from the SWP and 75% from the CVP; therefore, any increase in the in-basin demand falls disproportionately on the CVP. This issue is neither identified nor analyzed in the Initial Study; therefore, it is not possible to determine the impact of this proposed action on the CVP. It seems highly likely that the CVP will be impacted by the Settlement Agreement despite statements that no other parties will be harmed. For example, any new water supply obligations under the COA that trigger releases from Folsom or Shasta Reservoir could affect Reclamation’s ability to meet ESA requirements, water rights terms and conditions, and/or contractual commitments.

1B
1C
1D

The COA also commits DWR and Reclamation to protecting the SWP and CVP and meeting their legal obligations. On one hand, Reclamation does not believe that this Settlement Agreement represents a legal obligation of DWR, due to the recent litigation outcome discussed above. On the other hand, the COA represents joint DWR and Reclamation responsibilities, and DWR is not authorized to enter into an agreement as to those responsibilities on behalf of Reclamation. Through the COA, Reclamation is a de facto party to any agreement that redefines the terms of the COA. The Initial Study does not correctly disclose this relationship and the resulting impacts on Reclamation and therefore a Negative Declaration for this Agreement does not satisfy the requirements of CEQA.

1E
1F

The COA is fundamental to the CVP and SWP, as it recognizes shared common water supplies and obligations and spells out the relationship crucial to operations. Reclamation remains committed to the mutual implementation of the COA. Reclamation therefore respectfully requests that any proposal to change the COA, or the quantities and definitions therein, be mutually evaluated by DWR and Reclamation for consistency as well as impacts. This relationship is especially important considering potential changes due to the Bay-Delta Conservation Plan and flow requirements.

1G
1H

If you have any questions regarding this matter, please contact Mr. Ray Sahlberg, Mid-Pacific Water Rights Officer, at 916-978-5249 or email rsahlberg@usbr.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard M. Stevenson". The signature is fluid and cursive, with a large initial "R" and "S".

Richard Stevenson
Acting Regional Resources Manager



301 North Lake Avenue
10th Floor
Pasadena, CA 91101-4108
Phone: 626.793.9400
Fax: 626.793.5900
www.lagerlof.com

Established 1908

August 9, 2013

VIA E-MAIL [Ted.Alvarez@water.ca.gov] & FIRST CLASS MAIL

Mr. Ted Alvarez, Supervising Engineer
California Department of Water Resources
State Water Project Analysis Office
1416 Ninth Street, Room 1620
Sacramento, CA 95814

Re: Comments of Palmdale Water District to Initial Study/Proposed Negative Declaration – State Water Project Supply Allocation Settlement Agreement

Dear Mr. Alvarez:

We are the attorneys for Palmdale Water District (“PWD”), one of the intervening parties in the Area of Origin litigation and also a lessee of State Water Project Table A from Butte County. We have reviewed the draft settlement agreements and the Initial Study/Proposed Negative Declaration in this matter on PWD’s behalf and offer the following comments:

- 1. On page 3-54, in Section 3.11 – Mineral Resources, Subsection 3.11.1 – Environmental Setting, the fifth sentence states, “Both oil and natural gas production occurs in the service areas of the Westside Districts and PWD, in Kern and Kings Counties.” That sentence is incorrect, as no oil or natural gas production occurs in PWD’s service area. In addition, PWD is entirely located in Los Angeles County. 2A
- 2. On the discussion of the Monterey Amendment, the first full paragraph on page 3-90 is confusing and also does not clearly state the outcome of the December 2012 trial court ruling: First, on the fifth line of that paragraph, reference is made to “the Attached A Amendments” but it is not clear to what that is referring. Thus, the referenced amendments should be more clearly described. 2B
2C

Second, the next to last sentence of that paragraph states, “In December 2012, a Sacramento County Superior Court judge ruled in favor of DWR.” While that sentence is true, it would be better if more detail regarding that ruling was provided. 2D

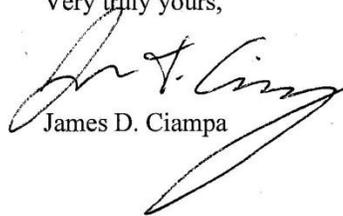
Mr. Ted Alvarez, Supervising Engineer
California Department of Water Resources
August 9, 2013
Page 2

We suggest revising that sentence and combining it with the last sentence in that paragraph, to read as follows: "In December 2012, a Sacramento County Superior Court judge ruled in favor of DWR and other real parties in interest and dismissed the plaintiffs' reverse validation and related mandamus claims, thereby leaving only the plaintiffs' CEQA cause of action to still be litigated in the Sacramento County Superior Court."

↑
Cont.
2D

Thank you for the opportunity to comment on the Initial Study/Proposed Negative Declaration and please feel free to contact me if you have any questions concerning these comments.

Very truly yours,



James D. Ciampa

JDC/cc

cc: Mr. Dennis LaMoreaux, Palmdale Water District (via e-mail only)

Lagerlof
Senecal
Gosney & Kruse
LLP

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APPENDIX D

Responses to Comments

CEQA REQUIREMENTS

Before DWR may approve the project, it must consider the proposed negative declaration together with any comments received during the public review process. DWR shall adopt the proposed negative declaration only if: a) it finds on the basis of the whole record before it (including the initial study and any comments received), that there is no substantial evidence that the project will have a significant effect on the environment; and b) that the negative declaration reflects the DWR's independent judgment and analysis.

COMMENTS ON THE INITIAL STUDY/PROPOSED NEGATIVE DECLARATION AND RESPONSES TO COMMENTS

The Initial Study/Proposed Negative Declaration was circulated for public review and comment from July 19, 2013 to August 19, 2013. During this period, DWR received two letters with sets of comments, attached hereto. The responses to comments are numbered to correspond to the letter and the numbered comment, which DWR identifies in the margins of the each letter. The following section includes each comment and corresponding response. The comments are quotes from the comment letters.

CLARIFICATIONS AND ADDITIONS TO THE INITIAL STUDY/PROPOSED NEGATIVE DECLARATION

The clarifications were developed in response to comments received during the public review period. This final Initial Study/Negative Declaration reprints the Initial Study/Proposed Negative Declaration with revised text. Where the responses indicate additions or deletions to the text of the Initial Study/Proposed Negative Declaration, additions are included as underlined text, deletions as ~~stricken text~~. The revisions do not significantly alter the conclusions within the Initial Study/Proposed Negative Declaration. Rather the revisions are added to the Initial Study/Proposed Negative Declaration to merely clarify, amplify, or make insignificant modifications to the Initial Study/Proposed Negative Declaration.

1A *“Increasing the quantities of COA-defined “in-basin demands” affects the demands on storage of both the CVP and the SWP.”*

Response:

As described in Tables 2-1 and 2-2 of the Initial Study/Proposed Negative Declaration, the proposed project intends to deliver the water completely from State Water Project water. DWR does not intend to increase the quantities of COA-defined in-basin demands nor does it intend to redefine the terms of the COA. DWR is committed to develop a process, in coordination with the Bureau, that will quantify any changes in deliveries to SWP water supply contractors resulting from the proposed project, and will incorporate this information into the existing COA accounting process in a way that does not adversely affect CVP operations and/or deliveries. This document will be developed jointly through the CVP and SWP operations offices. See also Response to **Comment 1B**.

1B *“The initial study does not correctly identify the role of the COA in defining the relationship of SWP and CVP storage to North-of-Delta water service contracts. In the COA, the SWP and CVP north of Delta contractors are part of the defined “in-basin” demand.”*

Response:

See DWR’s Response to **Comment 1A**. Because DWR does not intend to impact the COA with its Proposed Project, DWR did not specifically identify the role of COA or define the relationship of SWP and CVP storage to North of Delta water service contracts. Even though the Proposed Project will not impact the COA-defined “in-basin demands”, DWR has determined that it can include the information within the Initial Study/Proposed Negative Declaration at page 2-14 – 2-15, clarifying the roles of the parties under the COA and that the proposed project is not intended to redefine the terms of the COA as follows:

Agreement for the Coordinated Operation of the Central Valley Project and the State Water Project (“COA”)

On November 24, 1986, pursuant to the Act of Congress approved October 27, 1986, P.L. 99-546, and pursuant to the California Central Valley Project Act and the California Water Resources Development Bond Act, the Bureau of Reclamation and DWR entered into an agreement for the Coordinated Operation of the Central Valley Project and the State Water Project. Within this COA, “Sacramento Valley Inbasin uses” are legal uses of water in the Sacramento Basin including the water required under the provisions of State Water Resources Control Board water quality standards for the Sacramento-San Joaquin Delta (hereafter In-basin Use).

DWR and the Bureau share responsibility for meeting In-basin Use with storage withdrawals during balanced water conditions. Each party’s responsibility for making available storage

withdrawals to meet In-basin Use of storage withdrawals shall be determined by multiplying the total In-basin Use of storage withdrawals by the following percentages: Bureau of Reclamation: 75%; DWR 25%.

The Bureau and DWR also share responsibility during balanced water conditions when unstored water for export is available. Each party's responsibility to meet In-basin Use and exports shall be determined by: (1) Allocating the sum of United States stored water, State stored water and the unstored water for export by the following percentages: Bureau of Reclamation: 55 %; DWR 45%.

Additionally, with certain exceptions, the parties account for accumulated responsibilities during balanced conditions.

The proposed project will not impact the COA because all deliveries will be made from SWP water. The proposed project is not intended to redefine the terms of the COA nor impact the COA-defined In-basin Use demands.

DWR is committed to develop a process, in coordination with the Bureau, that will quantify any changes in deliveries to SWP water supply contractors resulting from the proposed project, and will incorporate this information into the existing COA accounting process in a way that does not adversely affect CVP operations and/or deliveries. This document will be developed jointly through the CVP and SWP operations offices.

This revision does not change or revise the findings of the Initial Study/Proposed Negative Declaration. No new significant impact has been identified.

1C *“This in-basin demand is shared between SWP and CVP storage supplies, with 25% from the SWP and 75% from the CVP; therefore, any increase in the in-basin demand falls disproportionately on the CVP.”*

Response:

Please see DWR's Responses to **Comment 1A and Comment 1B**.

1D *“This issue is neither identified nor analyzed in the Initial Study; therefore, it is not possible to determine the impact of this proposed action on the CVP. It seems highly likely that the CVP will be impacted by the Settlement Agreement despite statements that no other parties will be harmed. For example, any new water supply obligations under the COA that trigger releases from Folsom or Shasta Reservoir could affect Reclamation's ability to meet ESA requirements, water rights terms and conditions, and/or contractual commitments.”*

Response:

Please see DWR's Responses to **Comment 1A and Comment 1B**. Because there will not be any new water supply obligations under the COA triggering releases from Folsom or Shasta Reservoir, the Proposed Project will not impact the Bureau of Reclamation's ability to meet ESA requirements, water rights terms and conditions, and/or contractual commitments. In addition, modeling done for the proposed project demonstrates that there is no significant environmental impact in the Delta, see Tables 2-7 through 2-14 of the Initial Study/Proposed Negative

Declaration reflecting information obtained through CALSIM modeling of CVP and SWP operations.

1E “The COA also commits DWR and Reclamation to protecting the SWP and CVP and meeting their legal obligations. On one hand, Reclamation does not believe that this Settlement Agreement represents a legal obligation of DWR, due to recent litigation outcome discussed above. On the other hand, the COA represents a joint DWR and Reclamation responsibilities and DWR is not authorized to enter into an agreement as to those responsibilities on behalf of Reclamation.”

Response:

Please see DWR’s Response to **Comment 1A**. The Bureau of Reclamation’s comments regarding the COA are outside the scope of the Initial Study/Proposed Negative Declaration. DWR is not intending to enter into a settlement agreement on behalf of Reclamation, a non-party to the litigation filed against DWR.

1F “Through the COA, Reclamation is a de facto party to any agreement that redefines the terms of the COA.”

See DWR’s Responses to **Comment 1A and Comment 1B**. The parties to the settlement agreement do not intend to redefine the terms of the COA.

1G “Reclamation therefore respectfully requests that any proposal to change the COA, or the quantities and definitions therein, be mutually evaluated by DWR and Reclamation for consistency as well as impacts.”

Response:

See DWR’s Response to **Comment 1A and Comment 1B**. DWR is not proposing to change the COA or the quantities and definitions therein. The proposed project is not intended to redefine the terms of the COA nor impact the COA-defined In-basin Use demands. DWR will meet with Reclamation staff to review the analysis of the project, including modeling, to explain the evaluation and conclusions related to project impacts.

1H “This relationship is especially important considering potential changes due to the Bay-Delta Conservation Plan and flow requirements.”

Response:

The Bureau of Reclamation’s comment is noted. Please see DWR’s discussion of the Bay Delta Conservation Plan at p. 3-83 of the Initial Study/Proposed Negative Declaration. See also DWR’s Response to **Comment 1A and Comment 1B**.

2A *On page 3-54, in Section 3.11 – Mineral Resources, Subsection 3.11.1 – Environmental Setting, the fifth sentence states, “Both oil and natural gas production occurs in the service areas of the Westside District and PWD, in Kern and Kings Counties.” That sentence is incorrect, as no oil or natural gas production occurs in PWD’s service area. In addition PWD is entirely located in Los Angeles County.*

Response:

Comment noted. DWR has determined that, based on Palmdale Water District’s comment, DWR will include clarifying information within the Initial Study/Proposed Negative Declaration indicating this information. The referenced discussion on page 3-54 is revised to read,

“~~Both~~ Oil and natural gas production occurs in ~~the service areas of the Westside Districts and service area PWD~~, in Kern and Kings Counties. PWD encompasses a 140-square-mile area scattered through the southern Antelope Valley, located almost entirely within the City of Palmdale city limits extending into unincorporated areas of Los Angeles County that are within the City’s sphere of influence.”

This revision does not change or revise the findings of the Initial Study/Proposed Negative Declaration. No new significant impact has been identified.

2B *On the discussion of the Monterey Amendment, the first full paragraph on page 3-90 is confusing and also does not clearly state the outcome of the December 2012 trial court ruling.*

Response:

The paragraph presented on page 3-90 is revised to read,

On February 1, 2010, DWR prepared and certified a final EIR for the Monterey Plus project. Shortly thereafter the Central Delta Water Agency and other plaintiffs filed suit in the Sacramento County Superior Court. The plaintiffs’ petition for writ of mandate and complaint for declaratory and injunctive relief challenged the sufficiency of the new Monterey Plus EIR under CEQA. The plaintiffs also challenged the validity of the Monterey Amendment, the Kern Fan Element Transfer Agreement, and the ~~Attached A~~ Amendments. ~~Additionally, the plaintiffs brought a reverse validation action against DWR challenging the validity of the agreement to transfer the Kern Fan Element property from DWR to Kern County Water Agency, and brought a mandamus cause of action as an alternative to the reverse validation action.~~ In December 2012, a Sacramento County Superior Court judge ruled in favor of DWR and other real parties in interest and dismissed the plaintiffs’ reverse validation and related mandamus claims, thereby leaving only the plaintiffs’ CEQA cause of action to still be litigated in the Sacramento County Superior Court. ~~The CEQA cause of action is still being litigated in the Sacramento County Superior Court.~~

2C *“...on the fifth line of that paragraph, reference is made to ‘the Attached A Amendments’ but it is not clear to what that is referring. Thus, the referenced amendments should be more clearly described.”*

Response:

See response to **Comment 2B**. The reference to Attached A Amendments has been corrected. This revision does not change or revise the findings of the Initial Study/Proposed Negative Declaration. No new significant impact has been identified.

2D *“The next to last sentence of that paragraph states, ‘In December 2012, a Sacramento County Superior Court judge ruled in favor of DWR.’ While that sentence is true, it would be better if more detail regarding that ruling was provided. We suggest revising that sentence and combining it with the last sentence in that paragraph to read as follows: ‘In December 2012, a Sacramento County Superior Court judge ruled in favor of DWR and other real parties in interest and dismissed the plaintiffs’ reverse validation and related mandamus claims, thereby leaving only the plaintiffs’ CEQA cause of action to still be litigated in the Sacramento County Superior Court.’”*

Response:

See response to **Comment 2B**. The suggested language has been inserted into this paragraph. This revision does not change or revise the findings of the Initial Study/Proposed Negative Declaration. No new significant impact has been identified.