

Executive Summary

ES.1 Introduction

This Environmental Impact Report/Environmental Impact Statement (EIR/EIS) has been prepared by the Sites Project Authority (Authority) and the U.S. Department of the Interior, Bureau of Reclamation, Mid-Pacific Region (Reclamation) to address the potential effects of the proposed Sites Reservoir Project (Project). The Authority is the lead agency under the California Environmental Quality Act (CEQA), and Reclamation is the lead agency for compliance with the National Environmental Policy Act (NEPA).

An initial Notice of Preparation (NOP) was issued on November 5, 2001, to prepare an EIR under CEQA, and a Notice of Intent (NOI) published on November 9, 2001, to prepare an EIS under NEPA. The Project was formerly known as the North-of-Delta Offstream Storage (NODOS) Project, led by the California Department of Water Resources (DWR). The Authority has assumed the role of the CEQA lead agency in lieu of DWR and will be responsible for constructing, operating, and maintaining the Project. Because of this change in lead agency, the Authority issued a Supplemental NOP on February 2, 2017, related to the EIR for the Project. Copies of the original NOP and NOI are included in Appendix 36B Scoping Report, and a copy of the 2017 Supplemental NOP is included in Appendix 36A Supplemental Scoping Report.

This EIR/EIS describes the Project, a feasible range of alternatives, environmental setting, potential direct and indirect impacts that could result from implementation of each of the Projects alternatives, and mitigation measures for potentially significant impacts, as applicable. Five alternative methods of constructing and operating the Project to meet all or the majority of the purpose, need, and objectives of the Project (described as “action alternatives” in the resource chapters) are evaluated. The alternatives were developed to avoid or substantially lessen one or more of the Project’s significant impacts. Other alternatives evaluated over the past several decades (some of which were the subject of prior CEQA and NEPA analyses and decision making) are summarized below and discussed in Chapter 2 Alternatives Analysis, as well as in Appendix 2A Alternatives Screening Process.

The proposed Project facilities would primarily be located in Glenn and Colusa counties, approximately 10 miles west of the town of Maxwell (Figure ES-1 and Figure ES-2). The Project would include a new offstream surface storage reservoir (Sites Reservoir) with two main dams, up to nine saddle dams, and up to five recreation areas. The Sites Reservoir would be filled through the diversion of available Sacramento River flows via two existing diversions/canals (all alternatives) and a proposed new inlet diversion/outlet structure and pipeline (majority of alternatives). The proposed pipeline would allow for Sacramento River diversions for most alternatives, and discharge of water under all alternatives. Water conveyance between the reservoir and the canals and pipeline would be facilitated by two new regulating reservoirs. Pumping/electrical generating facilities would also be included as part of most alternatives. A new overhead powerline would connect the pumping/generating plants and their associated electrical switchyards to an existing overhead powerline in the Project area. New roads and a bridge across the proposed Sites Reservoir would be constructed to provide access to the proposed Project facilities and over the proposed reservoir, and some existing roads would be relocated or improved. The Project would require modifications to one of the existing canals and pumping plants. A more complete description of the Project can be found in Chapter 3 Description of the Sites Reservoir Project Alternatives.

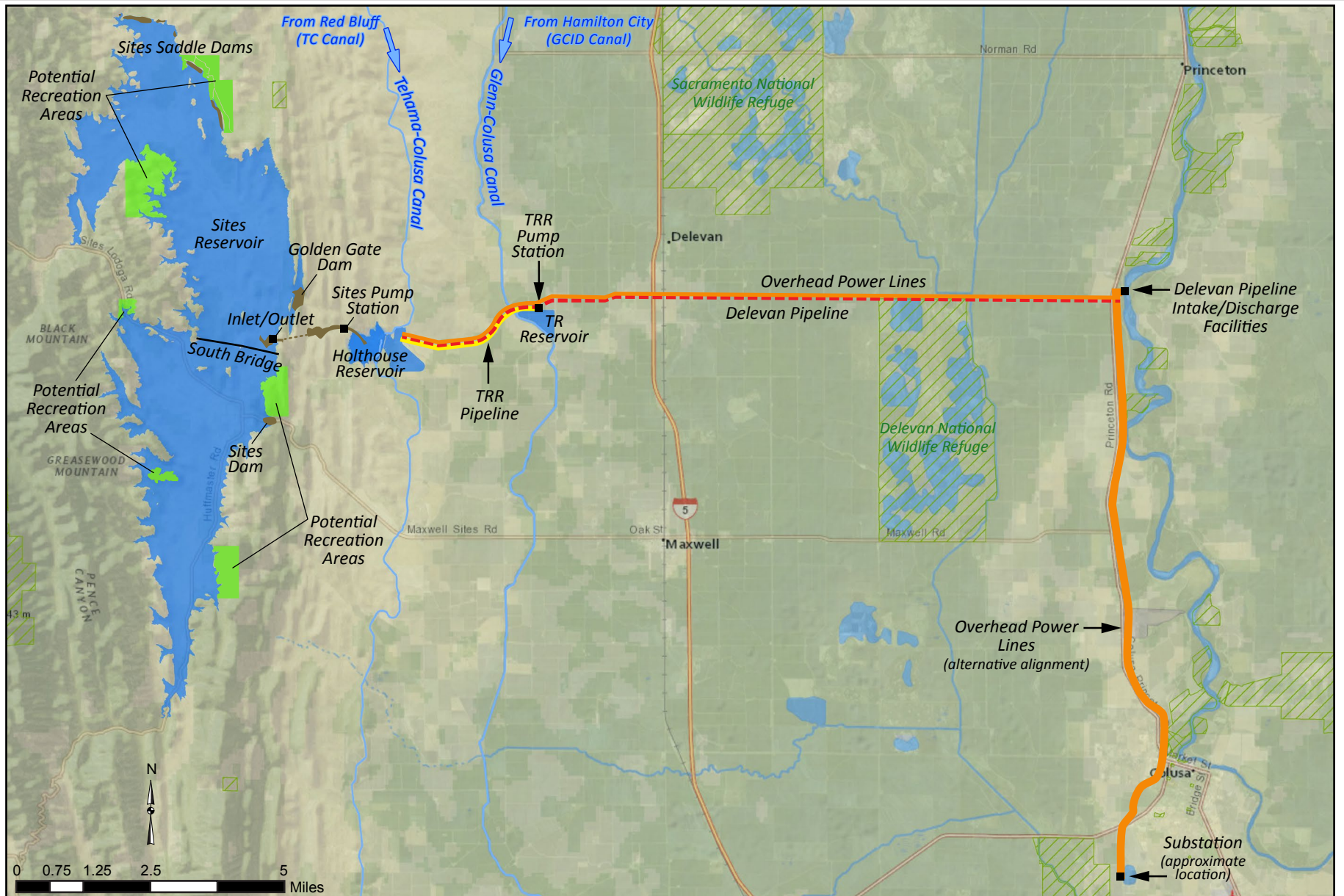


FIGURE ES-2
Proposed Sites Reservoir Project Facilities
 Sites Reservoir Project EIR/EIS

ES.1.1 Project Objectives and Purpose and Need

The Project objectives and the statement of purpose and need have not changed materially since the 2001 NOP issued by DWR and the 2001 NOI issued by Reclamation. However, this EIR/EIS elaborates on the objective and purpose stated in the 2001 NOP and NOI related to providing storage and operational benefits for water quality and other programs. The Authority and Reclamation also are considering a set of secondary Project objectives and purposes that are consistent with and complement the primary Project objectives. The following objectives and purpose and need for the Project are to provide surface water storage north of the Sacramento-San Joaquin Delta (Delta) in order to:

- Enhance water management flexibility in the Sacramento Valley
- Increase reliability of California water supplies
- Provide storage and operational benefits for programs to enhance water supply reliability, both locally and State-wide, benefit Delta water quality, and improve ecosystems by providing:
 - Net improvements in ecosystem conditions in the Sacramento River system and Delta
 - Net improvements in water quality conditions in the Sacramento River system and Delta
 - Net improvements in State-wide water supply reliability for agricultural and urban uses to help meet water demands during drought periods and emergencies, or to address shortages due to regulatory and environmental restrictions
 - Net improvements in water supply reliability for fish protection, habitat management (including refuges), and other environmental water needs

Secondary objectives for the Project are to:

- Allow for flexible hydropower generation, in order to support the integration of renewable energy sources
- Develop additional recreation opportunities
- Provide incremental flood damage reduction opportunities

As a result of changing regulatory requirements and population growth, the challenges associated with meeting a variety of water demands including urban, environmental, and agricultural needs have increased over time since the initial construction and operation of the Central Valley Project (CVP) and State Water Project (SWP). Consequently, the major water systems that depend on runoff in the Sacramento River and San Joaquin River watersheds continue to experience reduced flexibility in timing, location, and capacity to meet these multiple objectives. These increasing commitments continue to affect all reservoirs including large reservoirs within the Sacramento River watershed, as seen in decreasing end-of-water-year storage trends. Additionally, the effects of climate change including sea-level rise, variability and uncertainty associated with changing snow and rainfall patterns, and increased air temperatures will further impact operations and supply availability. The proposed Project would divert and store water within the Sacramento River watershed when available during high-flow events and when not meeting other environmental and water supply requirements. This water would then be released for beneficial uses to meet Project objectives in compliance with various operating agreements (to be developed under the Water Storage Investigation Program), and relevant permits and approvals. The Project's reliance on rainfall-produced Sacramento River tributary flows downstream of Shasta Lake and

ability to store flows when available pursuant to water rights and regulatory requirements is intended to provide a new and resilient source of supply to assist in improving ecosystem conditions, water supply reliability, and Delta water quality.

ES.1.2 Secondary Objectives and Purposes

ES.1.2.1 Allow for Flexible Hydropower Generation to Support the Integration of Renewable Energy Sources

The Project would be built with pumping/generating plants that would be capable of producing hydropower. If the hydropower component of the Project is implemented, electricity would be generated when water is released from Sites Reservoir into the proposed Holthouse Reservoir, and from the proposed Holthouse Reservoir to the proposed Terminal Regulating Reservoir (TRR) and into the Sacramento River. In pump-back operations mode, water would be released from Sites Reservoir into the proposed Holthouse Reservoir during on-peak hours to generate electricity, and water would be pumped back into Sites Reservoir during the off-peak hours to complete the pump-back operations cycle. Additional water storage provided by the Project could facilitate flexible power generation, which could be quickly ramped up or down to complement wind or solar generation to meet power demands and support reliable operation of the power grid. Hydropower provided by the Project could be brought online relatively quickly and would be well suited to provide flexible generation.

ES.1.2.2 Develop Additional Recreational Opportunities

The development of Sites Reservoir would provide new recreational areas and facilities adjacent to the reservoir to allow for and encourage water-related recreational activities such as fishing, swimming, camping, boating, and hiking.

ES.1.2.3 Provide Incremental Flood Damage Reduction Opportunities

Offstream storage can provide incremental flood damage reduction improvements to areas that are prone to flooding immediately downstream of Sites Reservoir and downstream of the diversions of the Sacramento River. The Project would reduce flows on Funks and Stone Corral creeks, which are known to cause local food damage (most recently in 2017 to the town of Maxwell), and assist in improving local flood control management. Diversions during high flows in the Sacramento River into Sites Reservoir also could reduce flood risks downstream of those diversion points.

ES.2 Approach to Alternatives Analysis

The range of alternatives for the Project was developed through the consideration of reservoir alternatives accounting for:

- The completion of previous analyses (including the CALFED Bay-Delta Program [CALFED] EIR/EIS and Integrated Surface Storage Investigation studies)
- This EIR/EIS and comments received during the scoping process for this EIR/EIS
- Screening the range of feasible alternatives by comparing them with the Project objectives and purpose and need statement and evaluating those alternatives that have the potential to avoid or substantially lessen one or more of the Project's significant impacts

Multiple alternatives related to north-of-the-Delta offstream storage reservoirs have been developed and evaluated since 1930 in numerous studies completed by DWR and local agencies, as described in Chapter 2 Alternatives Analysis. The range of alternatives previously evaluated has included reservoirs that have been constructed (e.g., Black Butte Reservoir on Stony Creek) and numerous reservoirs that have not been constructed, including the previously evaluated Sites, Newville, Colusa, Glenn, Dippingvat, Schoenfield, Paskenta, Dutch Gulch, and Tehama proposed reservoirs, as well as groundwater storage approaches.

ES.2.1 CALFED Reservoir Alternatives

The CALFED Program began in 1995 after several federal, State, and local agencies signed the Bay-Delta Framework Agreement in December 1994.¹ The CALFED Program initiated the evaluation of expanded surface water storage in the Sacramento and San Joaquin valleys as part of a long-term comprehensive plan to restore the ecological health and improve water management to protect beneficial uses in the Delta and the Delta watershed. The CALFED Program identified the need for up to 3.0 million acre-feet (MAF) of additional surface water and/or groundwater storage in the Sacramento Valley, 2.0 MAF additional surface water and/or groundwater storage in or near the Delta, and 0.5 MAF surface water storage and 0.5 MAF groundwater storage in the San Joaquin Valley to meet environmental and water supply needs.

During preparation of the CALFED EIR/EIS, the CALFED Program initially identified 52 potential surface storage locations and retained 12 reservoir locations statewide for further study.² The screening criteria indicated a preference for offstream over onstream surface water storage to avoid redirected impacts on aquatic species in the primary tributaries of the Delta. A summary of the CALFED Program Inventory of Potential Surface Water Storage Sites and the results of the screening of the range of alternatives to define those alternatives evaluated in detail in the CALFED EIR/EIS are presented in Appendix 2A Development of Alternatives.

ES.2.2 Reservoir Alternatives Analyzed between 2000 and 2013

Following the CALFED Record of Decision (ROD), DWR and Reclamation initiated development of an EIR/EIS and continued to analyze potential locations for a reservoir on the western side of the Sacramento Valley as part of a DWR Surface Water Storage Investigation. Alternatives previously considered for new surface water reservoirs on the western side of the Sacramento Valley and alternatives identified during the 2001–2002 EIR/EIS scoping process (see Appendix 36B Scoping Report) were considered. As described in Appendix 2A Development of Alternatives, an initial screening process was conducted for the west Sacramento Valley reservoir alternatives evaluated in detail in the Surface Water Storage Investigations reports.³ The results of the analysis identified the following four alternatives:

- Red Bank Alternative (Dippingvat and Schoenfield Reservoir)
- Newville Reservoir Alternative
- Colusa Reservoir Alternative
- Sites Reservoir Alternative (Project)

¹ CALFED Bay-Delta Program (CALFED). 2000. *CALFED Initial Surface Water Storage Screening*. August.

² CALFED Bay-Delta Program (CALFED). 2000. *Final Programmatic Environmental Impact Statement/Environmental Impact Report*. July.

³ California Department of Water Resources (DWR). 2006. *North-of-the-Delta Offstream Storage Initial Alternatives Information Report*.

During the 2001–2002 scoping process for this EIR/EIS, many scoping comments were received related to west Sacramento Valley reservoir alternatives, including consideration of Sites and Newville reservoirs; conveyance facilities to provide water into and from the reservoirs; and water sources including groundwater. Most of the comments specific to Newville Reservoir opposed the Newville Reservoir formulation because of potential impacts on wildlife and fish habitat, cultural resources, and historical resources at the Newville Reservoir site, and impacts on wildlife habitat and cattle along proposed access roads. Other comments were provided related to other options not consistent with the Project’s objectives and purpose and need statement.

The four west Sacramento Valley reservoir alternatives listed above (Red Bank, Newville, Colusa, and Sites reservoirs) were compared to screening criteria in a three-step screening process based on legal considerations under CEQA and NEPA, including the ability to meet the project objectives and purpose and need statement, avoid or reduce adverse effects, and/or provide benefits. The result of this screening process was the selection of the Sites Reservoir location as the alternative most able to meet the project objectives and purpose and need while minimizing impacts and providing the greatest potential benefits. The option of including the expansion of Shasta Lake was also considered as part of the 2001–2006 Surface Water Storage Investigation. However, during this period, a concurrent investigation was being conducted by Reclamation for the expansion of Shasta Lake. As was described in the CALFED ROD, expansion of Shasta Lake and a new reservoir on the western side of the Sacramento Valley were considered as separate projects to meet similar but different objectives and purpose and need statements.

Additionally, a variety of water sources (and associated conveyance options) including diversions from the Colusa Basin Drain, the Sacramento River, and local tributaries including Stony Creek were also evaluated. Potential conveyance systems from these sources to the proposed Sites Reservoir included existing and/or enlarged Tehama-Colusa and Glenn-Colusa Irrigation District (GCID) Main canals, and/or a new conveyance facility from the Sacramento River near Moulton Weir and/or from the Colusa Basin Drain to the existing Funks Reservoir on the Tehama-Colusa Canal. Conveyance from Stony Creek was also considered. All conveyance alternatives required enlargement of the existing Funks Reservoir to provide adequate storage capacity for pumping of water into the reservoir and hydropower generation. The evaluation process culminated in selection of the existing Tehama-Colusa Canal Authority (TCCA) and GCID diversion and conveyance facilities in addition to a new Delevan Pipeline from the Sacramento River near the Moulton Weir. These facilities were determined to be the most reliable and capable of assisting in meeting the Project need and objectives.

ES.2.3 Range of Alternatives in this EIR/EIS

Four surface water reservoir size and conveyance options (in addition to a “sub-alternative” that would not include power generation at the Delevan release structure) were retained for detailed review in this EIR/EIS. All alternatives would include a Sites Reservoir that would be filled using existing Sacramento River diversion facilities and a proposed Delevan Pipeline on the Sacramento River to allow for release of flows into the Sacramento River. All but one alternative would also use the proposed Delevan Pipeline to divert Sacramento River water. The Project would divert and store water appropriated by the Authority pursuant to State law within the Sacramento River watershed when available and not meeting required environmental and water supply needs. This water could then be released for beneficial uses to meet Project objectives in compliance with various operating agreements, relevant permits, and approvals.

The proposed operations vary between Alternatives A, B, C, C₁, and those included in Alternative D. The final operations of the Project are intended to be flexible and expected to vary from year to year in

response to compliance with permit conditions and the needs of the California water supply system to provide high-quality water to enhance the environment, the economy, and quality of life for Californians. The specific operational parameters included in this Draft EIR/EIS were identified to support/evaluate the upper bound of potential impacts. The operations evaluated for Alternative D were based on operations included in the application to the California Water Commission for the Water Storage Investment Program (WSIP). The operations included in that application were specifically selected to respond to the requirements of that program and its evaluation criteria.

Associated facilities for all alternatives would be similar but would vary in location and size as further described in Chapter 3 Description of the Sites Reservoir Project Alternatives. The following action alternatives are evaluated in this EIR/EIS:

- **Alternative A – 1.3-MAF Sites Reservoir with Delevan Pipeline.** Alternative A would include a 1.3-MAF Sites Reservoir with conveyance to and from the reservoir provided by the existing Tehama-Colusa and GCID Main canals, and a new Delevan Pipeline (2,000-cubic-foot-per-second [cfs] diversion/1,500-cfs release). This alternative would also include new hydropower facilities.
- **Alternative B – 1.8-MAF Sites Reservoir with Release-only Delevan Pipeline.** Alternative B would include a 1.8-MAF Sites Reservoir with conveyance to and from the reservoir provided by the existing Tehama-Colusa and GCID Main canals, and a new release-only Delevan Pipeline (1,500-cfs release). This alternative would also include new hydropower facilities.
- **Alternative C – 1.8-MAF Sites Reservoir with Delevan Pipeline (and Subalternative C₁).** Alternative C would include a 1.8-MAF Sites Reservoir with conveyance to and from the reservoir provided by the existing Tehama-Colusa and GCID Main canals, and a new Delevan Pipeline (2,000-cfs diversion/1,500-cfs release). This alternative would also include new hydropower facilities. Subalternative C₁ is identical to Alternative C, except that it would not include any hydropower-generating facilities.
- **Alternative D – 1.8-MAF Sites Reservoir with Delevan Pipeline.** Alternative D would include a 1.8-MAF Sites Reservoir with conveyance to and from the reservoir provided by the existing Tehama-Colusa and GCID Main canals, and a new Delevan Pipeline (2,000-cfs diversion/1,500-cfs release). This alternative would include more Sites Reservoir water supply designated for Sacramento Valley agricultural water users than the other alternatives, alternative road relocations to the other alternatives, and an alternate alignment of a proposed overhead power line. This alternative would also include new hydropower facilities.

As described above and in Chapter 2 Alternatives Analysis, the CEQA Existing Conditions and the NEPA No Action (as well as the similar CEQA No Project) base conditions were assumed to be essentially the same such that all action alternatives are compared to what is termed the “Existing Conditions/No Project/No Action Condition” (further described in Section ES.4 Existing Conditions/No Project/No Action Condition and Chapter 2 Alternatives Analysis).

Table ES-1 provides a summary list of proposed Project facilities for each action alternative. The table is generally organized by complex with key Project features including:

- **Sites Reservoir Complex:** Sites Reservoir Inundation Area, Golden Gate Dam, Sites Dam, Saddle Dams, Recreation Areas, South Bridge and Roads, Sites Pumping/Generating Plant and Electrical Switchyard, Sites Reservoir Inlet/Outlet Structure and associated facilities, and Maintenance Yard

- **Holthouse Reservoir Complex:** Holthouse Reservoir and Dam, breached existing Funks Dam, existing Funks Reservoir Dredging, Holthouse Spillway and Stilling Basin, Tehama-Colusa Canal Discharge Dissipater, Tehama-Colusa Canal Bypass Pipeline, and Holthouse to Tehama-Colusa Canal Pipeline
- **TRR Complex:** GCID Main Canal Modifications, GCID Main Canal Connection, TRR, TRR Pumping/Generating Plant and Electrical Switchyard, and TRR Pipeline and Road
- **Overhead Power Lines and Substations:** Substations, Electrical Connections for Sites, TRR and Delevan Pumping/Generating Plants
- **Delevan Pipeline Complex:** Delevan Pipeline Intake/Discharge Facilities, Forebay, Pumping/Generating Plant, Electrical Switchyard, Maintenance and Electrical Buildings, Delevan Pipeline
- **Project Buffer:** Total land acquired for the Project beyond the facility footprints, out to the nearest existing parcel boundaries; applies to Sites Reservoir Complex, Holthouse Reservoir Complex, TRR Complex, and Delevan Complex (excluding the pipelines)

**Table ES-1
Comparison of Proposed (and Existing) Project Facilities and Features**

Project Features/Facilities^a	Alternative A	Alternative B	Alternative C	Alternative C₁	Alternative D
Sites Reservoir Complex					
Sites Reservoir Inundation Area	1.3-MAF capacity (12,400 acres)	1.8-MAF capacity (14,200 acres)	Same as B	Same as B	Same as B
Golden Gate Dam, Sites Dam, Saddle Dams	9 dams (Golden Gate Dam; Sites Dam; Saddle Dams 1, 3, 5, 6, 8a, 8b, 10)	11 dams (Golden Gate Dam; Sites Dam; Saddle Dams 1, 2, 3, 4, 5, 6, 7, 8, 9)	Same as B	Same as B	Same as B
Borrow Areas ^b	Approximately 920 acres in inundation area; 200 acres northeast and east of the inundation area	Same as A	Same as A	Same as A	Same as A
Sites Reservoir Inlet/Outlet Structure and Associated Facilities	Multi-level valve tower and gate shaft; 4,000-foot-long tunnel; 220-foot-high structure; four 32-foot-diameter intake openings at seven levels; trash racks and fish screens; bridge; 15,200-cfs emergency release outlet capacity	Same as A but taller structure (260 feet); intake opening at nine levels	Same as B	Same as B	Same as B
Sites Pumping/Generating Plant and Electrical Switchyard	5,900-cfs pumping capacity; 5,100-cfs generating capacity; 4-acre switchyard with overhead power line tower, at pumping/generating plant	3,900-cfs pumping capacity; 5,100-cfs generating capacity	Same as A	5,900-cfs pumping capacity; (no generation)	Same as A
South Bridge and Roads	Temporary construction roads, several access roads to new facilities, and new roads to replace those currently in the inundation area; South Bridge to provide access between Maxwell and Ladoga	Same as A but slight difference related to access for Saddle Dam 10 for A	Same as B	Same as B	Same as B but with a road to provide access to the community of Leesville; some southern roads not needed

Project Features/Facilities^a	Alternative A	Alternative B	Alternative C	Alternative C₁	Alternative D
Recreation Areas ^c	Saddle Dam, Stone Corral, Antelope Island, Lurline Headwaters, Peninsula Hills	Same as A	Same as A	Same as A	Stone Corral, Peninsula Hills, boat ramp day use area
Field Office Maintenance Yard	Administration, maintenance buildings, asphalt batch plant (possible temporary location), and parking (also serves Holthouse Reservoir and TRR)	Same as A	Same as A	Same as A	Same as A
Holthouse Reservoir Complex					
Holthouse Reservoir	6,250-acre-foot active storage capacity	Same as A	Same as A	No Holthouse Reservoir; modifications to existing Funks Reservoir; 3,372-acre-foot capacity	Same as A
Holthouse Spillway and Stilling Basin and Spillway Bridge	15,200-cfs capacity	Same as A	Same as A	Existing Funks Reservoir 15,200-cfs gated spillway	Same as A
WAPA Transmission Line Relocation	8 transmission line towers moved to the west	Same as A	Same as A	None	Same as A
Sites Pumping/Generating Plant Approach Channel	6,300 feet long	Same as A	Same as A	Same as A	Same as A
Tehama-Colusa Canal Construction Bypass Pipeline/Operation and Maintenance Siphon to Tehama-Colusa Canal	12-foot-diameter approximate 2,600-foot-long siphon pipeline would divert Tehama-Colusa Canal water around Holthouse Reservoir during construction; during operation, water would pass to the canal downstream of the reservoir without pumping	Same as A	Same as A	Same as A; could be used for re-routing water from Tehama-Colusa Canal during maintenance of Funks Reservoir	Same as A

Project Features/Facilities^a	Alternative A	Alternative B	Alternative C	Alternative C₁	Alternative D
Additional Pump at the Red Bluff Pumping Plant (Secondary Study Area)	Install two additional 250-cfs-capacity pumps	Same as A	Same as A	Same as A	Same as A
Terminal Regulating Reservoir Complex					
Terminal Regulating Reservoir	2,000-acre-foot capacity; 200 acres; approximately 4,000-foot-long, 60-inch-diameter underground outlet pipe to Funks Creek	Same as A	Same as A	Same as A	1,200-acre-foot capacity; 150 acres; only a minimal drain would be required because of proximity of TRR to Funks Creek
TRR Pumping/Generating Plant and Electrical Switchyard	1,800-cfs pumping capacity; 900-cfs generating capacity; 4-acre electrical switchyard	Same as A	Same as A	1,800-cfs pumping (no generation)	Same as A
GCID Main Canal Connection to TRR	GCID Main Canal energy dissipation bay/check structure; TRR inlet channel and inlet control structure	Same as A	Same as A	Same as A	Similar to A, however approach would be smaller
TRR Pipeline and TRR Pipeline Road	1,800-cfs pumped capacity; 900-cfs gravity flow capacity; 2.5-mile road	Same as A	Same as A	Same capacity as A; longer TRR Pipeline for delivering GCID Main Canal flows from TRR to modified Funks, and slightly longer TRR Pipeline Road	Same as A
GCID Main Canal Modifications	New headgate and canal lining	Same as A	Same as A	Same as A	Refurbished existing gates; canal lining immediately upstream and downstream of the TRR

Project Features/Facilities^a	Alternative A	Alternative B	Alternative C	Alternative C₁	Alternative D
Delevan Complex					
Delevan Pipeline Intake/Discharge Facilities	250-foot-long by 80-foot-wide facilities building with multiple stories; four 500-cfs-capacity pumping/generating units; two 750-cfs turbines	Smaller structure required for discharge-only facilities	Same as A	Same as A	Same as A
Flat Plate Fish Screen Structure and Forebay	560-foot-long structure; 13-foot-high by 15-foot-wide flat plate screens (32 total); 2,000-cfs capacity; forebay would be constructed between fish screen and pump turbine station	Fish screen and forebay not necessary for discharge-only facility; would include a spillway with fish barrier racks and energy dissipation valves	Same as A	Same as A	Same as A
Pumping/Generating Plant	2,000-cfs pumping capacity; 1,500-cfs generating capacity	No pumping/generating plant (release only); discharge only; 1,500-cfs gravity release flow; energy dissipation valve and structure to minimize river release energy	Same as A	2,000-cfs pumping capacity (no generation)	Same as A
Electrical Switchyard	4-breaker ring bus with poles 15 to 60 feet tall	No switchyard needed	Same as A	Same as A	Same as A
Maintenance and Electrical Buildings	Mechanical control building; electrical building; (each approximately 5,000 square feet)	Not needed for B	Same as A	Same as A	Same as A
Delevan Pipeline	East-west alignment from Delevan Pipeline Intake/Discharge Facilities to Holthouse Reservoir; 2,000-cfs-capacity pumping and 1,500-cfs-capacity release	Same alignment as A No pumping; 1,500-cfs-capacity release	Same as A	Same as A	50 to 150 feet south of alignment for A, B, C, and C ₁ ; same capacity as A

Project Features/Facilities ^a	Alternative A	Alternative B	Alternative C	Alternative C ₁	Alternative D
Overhead Power Lines and Substations					
Substations	Stepdown power from the existing WAPA 230-kV and PG&E 230-kV lines near Funks/Holthouse Reservoir; up to 6 acres, including multiple electrical components and related structures, concrete pad, transmission tower, fencing	Same as A	Same as A	Same as A	In addition to substation near Funks/Holthouse Reservoir identified in other alternatives, would include substation to stepdown power from existing WAPA 230-kV lines approximately 1 mile southwest of Colusa, north of Highway 20; up to 6 acres; similar facilities as A
Electrical Connection for Sites Pumping/Generating Plant	New 1- to 4-mile-long 230-kV or 115-kV overhead power line from the proposed substation west to Sites Pumping/Generating Plant	Same as A	Same as A	Same as A	Same as A
Electrical Connection for TRR Pumping/Generating Plant	New 230-kV or 115-kV overhead power line from the proposed substation, east to TRR Pumping/Generating Plant	Same as A	Same as A	Same as A	Same as A
Electrical Connection for Delevan Pumping/Generating Plant	New 230-kV or 115-kV overhead power line from the proposed Sites Substation, east to Delevan Pumping/Generating Plant	Local service from existing PG&E lines near SR 45 (no new west to east lines to the Sacramento River needed for Delevan discharge-only facility)	Same as A	Same as A	New 115-kV overhead power line along SR 45 from the proposed substation west of Colusa to the Delevan Pumping/Generating Plant; line will cross SR 45

Project Features/Facilities ^a	Alternative A	Alternative B	Alternative C	Alternative C ₁	Alternative D
Project Buffer					
	Total land acquired for the Project beyond the facility footprints, out to the nearest existing parcel boundaries ^d ; applies to Sites Reservoir Complex, Holthouse Reservoir Complex, TRR Complex, Delevan Complex (excluding the pipelines)	Same as A	Same as A	Same as A	Same as A

^aThe table is meant as a comparison illustrating the main differences between the alternatives; not all facilities or features of the Project are included in this table but are further detailed in Section 3.2 Construction and Operation/Maintenance Common to All Alternatives.

^bOffsite sources for filter, drain, and transition materials, and concrete aggregate would be required if the onsite sources of these materials are found to be unsuitable or if additional material is required. It is anticipated that approximately 80 percent of materials would come from onsite sources and 20 percent from existing offsite commercial sources

^cAccording to discussions with Glenn and Colusa counties, not all recreation areas would be constructed; all five are included to provide flexibility and a conservative analysis. Development of recreation areas will be phased based on public demand.

^dWhere the parcel boundary is less than 100 feet from the facility, the Project Buffer will extend beyond the parcel boundary to result in a minimum 100-foot-wide buffer. Acquisition or establishment of temporary or permanent easements of private properties, either through voluntary or eminent domain processes, would be required prior to initiation of construction activities.

Notes:

kV = kilovolt

PG&E = Pacific Gas and Electric Company

SR = State Route

WAPA = Western Area Power Authority

ES.2.4 Environmental Commitments Included as Part of the Project

The Authority and Reclamation would incorporate a number of standardized environmental measures, plans, protocols, and best management practices as environmental commitments as part of the Project. The Authority and Reclamation would also coordinate planning, engineering, design and construction, operation, and maintenance phases of the Project with applicable resource agencies. The following environmental commitments would be incorporated into any action alternative for any Project-related construction as well as operations/maintenance (as appropriate) activities:

- Worker Environmental Awareness Program (WEAP)
- Environmental Site Assessment (ESA)
- Construction Management Procedures
 - Fire Safety and Suppression
 - Construction Equipment, Truck, and Traffic Management
- Stormwater Pollution Prevention Plan, Erosion Control, Management, and Dewatering
 - Compliance with the Requirements of RWQCB Order No. 5-00-175
 - Spill Prevention and Hazardous Materials Management
- Mosquito and Vector Control
- Groundwater/Dewatering Water Supply
- Visual/Aesthetic Design, Construction, and Operation Practices
- Emergency Action Plans (e.g., Sites Dam, Golden Gate Dam, Saddle Dams)

ES.3 Purpose and Intended Uses of this EIR/EIS

This EIR/EIS, public and agency input, and the Draft Feasibility Report, are intended to be used by the Authority and Reclamation when considering approval of the Project. In addition to the Authority and Reclamation, several federal, State, regional, and local agencies, as well as decision-making bodies, have jurisdiction over resources that could be affected by the Project, or have other permitting or regulatory authority over certain aspects of the Project. These agencies and decision makers will review and consider the information contained in the Final EIR/EIS, and will consider it in their decision-making process. Refer to Table 1-1 in Chapter 1 Introduction for key consultation requirements for the Sites Reservoir Project and Chapter 4 Environmental Compliance and Permit Summary of this EIR/EIS.

ES.3.1 Study Areas

The Project has the potential to influence CVP and SWP system operations and water deliveries over a large geographic area. Three study areas were developed to evaluate potential Project impacts: the Extended, Secondary, and Primary study areas, which are summarized below.

ES.3.1.1 Extended Study Area

The Extended Study Area, consisting of the CVP and SWP service areas, is the largest and most diverse of the three study areas in terms of size, geography, land use, and habitat conditions. It is anticipated to experience minor effects with respect to changed operations and conditions, given no construction will occur in this area. As described in the various resource area chapters, impacts in this area would be limited to generally minor reservoir-level fluctuations and changes in releases across the CVP and SWP system. As such, it has been described and evaluated in the resource chapters of this document (Chapters 6 through 31) at the lowest levels of detail. Changes in conditions at the CVP and SWP facilities located south of the Delta (including the San Luis Reservoir) are considered within the Extended

Study Area. Changes within the CVP and SWP service areas, resulting only from changes in CVP and/or SWP water deliveries, are also considered within the Extended Study Area. The CVP and SWP service areas included in the Extended Study Area are shown on Figure 1-3 in Chapter 1 Introduction.

ES.3.1.2 Secondary Study Area

The Secondary Study Area is smaller than the Extended Study Area and consists of the majority of CVP and SWP facilities that could be affected by potential operations associated with certain Project alternatives; this study area has been described and evaluated in the resource chapters in more detail than for the Extended Study Area. The Secondary Study Area consists of the geographical area with CVP and SWP facilities located north of the Delta and in the Delta, and the streams downstream of the CVP and SWP reservoirs that could experience water surface elevation fluctuations or stream flow changes. Those facilities are located within the following 18 counties: Alameda, Butte, Colusa, Contra Costa, Del Norte, El Dorado, Glenn, Humboldt, Placer, Sacramento, Santa Clara, Shasta, Solano, Sutter, Tehama, Trinity, Yolo, and Yuba. Operational changes could occur as a result of the coordinated and integrated operation of the Project's facilities with those State and federal projects located on the American River, Trinity River, Clear Creek, Sacramento River, Sutter Bypass, Yolo Bypass, Feather River, and the Delta. The Secondary Study Area is shown on Figure 1-5 in Chapter 1 Introduction.

ES.3.1.3 Primary Study Area

The Primary Study Area is the focus of the resource evaluations in this EIR/EIS. The Primary Study Area includes the areas within Glenn and Colusa counties where short-term and long-term direct and indirect effects from constructing, operating, and/or maintaining proposed Project facilities may occur. This study area includes the footprints of the proposed Sites Reservoir inundation area and other proposed facilities (e.g., dams, intakes/discharge facilities, pipelines, overhead power lines, pumping/generating plants, recreation areas, road relocation areas, borrow areas, and associated facilities). It also includes the construction disturbance areas, i.e., the footprint of each proposed facility plus the area around each facility that would be disturbed over the short-term by Project-related construction activities, vehicles, and equipment. The Primary Study Area also includes the land parcels that surround those Project facilities; these parcels would be purchased but not developed for the Project and are referred to as the "Project Buffer." Facilities associated with Alternatives A, B, C, C₁, and D are shown on Figure 1-6A, Figure 1-6B, Figure 1-6C, Figure 1-6C₁, and Figure 1-6D, respectively, in Chapter 1 Introduction.

ES.3.2 Areas of Controversy/Issues to Be Resolved

The following areas of controversy and issues to be resolved have been identified to date through stakeholder meetings or during the preparation of this EIR/EIS:

- **Impacts on Project Area Property Owners:** Project development would require the demolition of existing structures, acquisition of private property, and relocation of displaced parties. These actions concern property owners within the Primary Study Area.
- **Impacts on Aquatic Biological Resources:** Project operations would change the flow patterns and the amounts of unregulated water in the Sacramento River. These changes, and the uncertainty of future regulatory constraints on both regulated and unregulated flows in the Sacramento River, are a concern within the Secondary Study Area.

- **Impacts on Tribal Resources:** Project development would affect burials, and potentially other sensitive tribal resources, and could be viewed by some as controversial.
- **Impacts on Terrestrial Biological Resources:** Golden eagles have been identified as foraging within the proposed Sites Reservoir Inundation Area and nesting within the proposed recreation areas. The U.S. Fish and Wildlife Service (USFWS) has expressed concern about the potential loss of nesting and foraging habitat for golden eagles, which are protected by the Bald and Golden Eagle Protection Act.

ES.4 Existing Conditions/No Project/No Action Condition

Existing conditions and the future No Project/No Action alternatives were assumed to be similar in the Primary Study Area, given the generally rural nature of the area, and limited potential for growth and development in Glenn and Colusa counties within the 2030 study period used for this EIR/EIS, as further described in Chapter 2 Alternatives Analysis. As a result, within the Primary Study Area, it is anticipated that the No Project/No Action Alternative would not entail material changes in conditions as compared to the existing conditions baseline.

With respect to the Secondary and Extended study areas, the effects of the proposed action alternatives would be primarily related to changes to available water supplies in the Secondary and Extended Study Areas; the Project's cooperative operations with other existing large reservoirs in the Sacramento watershed; and the resultant potential impacts and benefits to biological resources, land use, recreation, socioeconomic conditions, and other resource areas. DWR has projected future water demands through 2030 conditions that assume the vast majority of CVP and SWP water contractors would use their total contract amounts, and that most senior water rights users also would fully use most of their water rights. This increased demand, in addition to the projects currently under construction and those that have received approvals and permits at the time of preparation of the EIR/EIS, would constitute the Existing Conditions/No Project/No Action Condition. As described in Chapter 2 Alternatives Analysis, the primary difference in these projected water demands would be in the Sacramento Valley; and, as of the time of preparation of this EIR/EIS, the water demands have expanded to the levels projected to be achieved on or before 2030.

Accordingly, existing conditions and the No Project/No Action alternatives are assumed to be the same for this EIR/EIS and, as such, are referred to as the "Existing Conditions/No Project/No Action Condition," which is further discussed in Chapter 2 Alternatives Analysis. Applicable reasonably foreseeable plans, projects, programs, and policies that may be implemented in the future but that have not yet been approved are included as part of the analysis of cumulative impacts in Chapter 35 Cumulative Impacts. Potential impacts associated with climate change are addressed separately in Chapter 25 Climate Change and Greenhouse Gas Emissions.

ES.5 Summary of Potential Environmental Effects and Mitigation Commitments

The Project action alternatives would affect environmental resources in all three study areas to varying degrees, with most impacts potentially occurring in the Primary Study Area. Anticipated impacts would vary from construction-related effects that would be less than significant or would be reduced to less-than-significant levels through mitigation to those that would remain significant and unavoidable despite

proposed mitigation measures. In addition, many effects of the Project would be beneficial, particularly related to improved water supply reliability in drier years and potential ecosystem benefits.

Table ES-2 (provided at the end of this executive summary) summarizes the impacts by environmental resource for each Project alternative, the level of significance of the impact prior to mitigation, the proposed mitigation measure (as applicable), and the level of significance of the impact after mitigation. The proposed Project Mitigation Monitoring Plan is included as Appendix 1A.

ES.5.1 Identified Significant and Unavoidable Impacts

As shown in Table ES-2, the proposed Project action alternatives would likely result in the following potentially significant and unavoidable direct and indirect impacts.

ES.5.1.1 Terrestrial Biological Resources (Golden Eagle)

Construction and filling of the proposed Sites Reservoir Inundation Area, as well as construction of the proposed Recreation Areas, would result in the permanent loss of foraging and nesting habitat for the golden eagle. Although implementation of compensatory mitigation including land preservation and/or acquisition is proposed, these measures would not reduce this loss of habitat to less-than-significant levels.

ES.5.1.2 Paleontological Resources

Construction of the proposed Project facilities could affect paleontological resources. Mitigation measures would reduce the impacts, but not to a less-than-significant level if such resources are encountered during construction.

ES.5.1.3 Cultural Resources (Historical and Tribal Resources, Human Remains)

Construction of the proposed Project facilities would affect built historical and tribal resources, as well as human remains associated with a designated cemetery and adjacent areas. If these resources and/or areas are determined to be eligible for listing in the California Register of Historical Resources or National Register of Historic Places, mitigation measures would not reduce the impact to less-than-significant levels.

ES.5.1.4 Land Use (Community of Sites and Existing Land Uses)

Construction and filling of the proposed Sites Reservoir Inundation Area would result in the physical division and loss of the community of Sites, resulting in a significant and unavoidable impact. Construction of the proposed Project facilities would result in conversion of Prime Farmland, Unique Farmland or Farmland of Statewide Importance to non-agricultural use, resulting in significant and unavoidable impacts. Implementation of mitigation measures would not reduce these impacts to less-than-significant levels.

ES.5.1.5 Air Quality (PM₁₀, ROG, and NO_x)

Construction activities associated with all proposed Primary Study Area Project facilities, as well as activities (such as use of roads, recreation, electricity generation and consumption, and sediment dredging) associated with the long-term operation and maintenance of the Project, would result in significant and unavoidable emissions of particulate matter less than 10 microns in diameter (PM₁₀), reactive organic gas (ROG), and nitrogen oxide (NO_x).

ES.5.1.6 Climate Change and Greenhouse Gas Emissions

The greenhouse gas (GHG) emissions estimated for construction, operation, and maintenance of the Project when compared to applicable county standards would contribute to a cumulatively considerable effect that would be significant and unavoidable.

ES.5.2 Growth-inducing Impacts

Implementation of the Project would improve water supply reliability for agricultural, urban, and environmental uses; provide more options for water management; increase recreational opportunities; and increase temporary and permanent employment opportunities. Although it is not anticipated that the water made available from the Project would result in a direct increase in population or employment, the potential exists for the quantity of water made available by the Project to result in secondary effects of growth consistent with local general plans and regional growth projections in an agency's respective service area.

ES.5.3 Cumulative Impacts

Projects considered in the cumulative impacts analysis included other relevant multi-region projects and actions; water supply, water quality, and hydropower projects and actions in the vicinity of the proposed Project facilities and/or potentially affected by CVP and SWP operations; and ecosystem improvement projects and actions in the vicinity of the proposed Project facilities and/or potentially affected by CVP and SWP operations (refer to Chapter 35 Cumulative Impacts for the names and descriptions of each of project considered). Implementation of the Project would not result in the cumulatively considerable incremental contribution to an overall significant cumulative adverse effect.

ES.6 Coordination with Concerned Agencies and Stakeholders

In accordance with CEQA and NEPA, the Authority, Reclamation, and, previously, DWR conducted the following public scoping and agency coordination and consultation activities. Further information is provided in Chapter 36 Consultation and Coordination.

ES.6.1 Public Scoping

The Authority, Reclamation, and DWR notified interested parties of the scoping period and upcoming public scoping meetings through electronic and postal mailings, and through publication of the NOP and NOI. In November 2001, public notifications were also made through direct mailings to local landowners in and near the Sites and Newville reservoir alternative sites, and by advertisements in four local newspapers prior to the public meetings. In addition, a news release was placed on the DWR and Reclamation website home pages.

In January 2002, DWR and Reclamation conducted three scoping meetings (one meeting each in Sacramento, Maxwell, and Fresno, California) to seek public input and comments prior to the preparation of the EIR/EIS. In addition, DWR and Reclamation held a scoping meeting with the Native American tribes in Williams, California. At the scoping meetings and during the scoping comment period, the public was invited to submit written comments regarding the scope, content, and format of the environmental document by mail, fax, or email to representatives at DWR and Reclamation.

The Authority subsequently conducted two scoping meetings in February 2017 (one meeting in Sacramento and one meeting in Maxwell, California) to seek agency and public input and comments prior

to the preparation of the EIR/EIS. At the scoping meetings and during the scoping comment period, the public was invited to submit written comments regarding the scope, content, and format of the environmental document by mail, fax, or email to representatives at the Authority.

The original Scoping Report, which was prepared at the end of the scoping meetings and comment period in October 2002, is included in Appendix 36B Scoping Report; and a Supplemental Scoping Report, prepared following the scoping meetings conducted in 2017, is included in Appendix 36A Supplemental Scoping Report. This EIR/EIS accounts for and addresses comments received during the supplemental scoping period of February 2, 2017 through March 2, 2017, including public meetings held during this timeframe.

ES.7 Summary of Environmental Impacts by Resource

Table ES-2 summarizes anticipated Project impacts by resource for each alternative. The anticipated level of impact is shown as well as mitigation for those impacts anticipated to be potentially significant. Those impacts determined to be potentially significant and unavoidable are also identified. Additional detail for each impact is provided in each of the resource chapters of this EIR/EIS.

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**Table ES-2
Summary of Environmental Effects by Resource**

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
6. Surface Water Resources							
Impact Water Supply-1: Impact to Average Annual CVP or SWP Deliveries Compared to Deliveries Associated with the Existing Conditions/No Project/No Action Condition							
Extended, Secondary, and Primary Study Areas							
CVP Contract Deliveries							
Annual Long-term Averages	Similar	Similar	Similar	Similar	Similar	N/A	N/A
Annual Dry- and Critical-year Averages	Similar	Similar	Similar	Similar	Increased	N/A	N/A
SWP Contract Deliveries							
Annual Long-term Averages	Similar	Similar	Similar	Similar	Similar	N/A	N/A
Annual Dry- and Critical-years Averages	Increased	Increased	Increased	Increased	Increased	N/A	N/A
CVP/SWP Operational Flexibility	Increased	Increased	Increased	Increased	Increased	N/A	N/A
7. Surface Water Quality							
Impact SW Qual-1: A Violation of Any Water Quality Standard or Waste Discharge Requirement, or Otherwise Substantially Degrade Surface Water Quality							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity Lake, Trinity River Downstream of Trinity Lake and Lewiston Reservoir, Klamath River Downstream of Trinity River, Clear Creek Downstream of Whiskeytown Lake, Lake Oroville, Thermalito Complex, Feather River, Folsom Lake, Lake Natoma, and American River, Shasta Lake and Sacramento River from Shasta Lake and Keswick Reservoir to Freepport							
Water Temperatures	LS	LS	LS	LS	LS	N/A	N/A
Mercury, Nutrients, Salinity, and Dissolved Oxygen	LS	LS	LS	LS	LS	N/A	N/A
Yolo Bypass	LS	LS	LS	LS	LS	N/A	N/A
Sacramento-San Joaquin Delta, Suisun Bay, and Suisun Marsh							
Salinity and Dissolved Oxygen Concentrations	LS	LS	LS	LS	LS	N/A	N/A
Mercury and Selenium	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Construction within Natural Surface Waters (Golden Gate and Sites Dams, and Delevan Intake/Discharge Facilities)	LS	LS (N/A for intake facilities)	LS	LS	LS	N/A	N/A
Construction within Man-made Surface Waters (Funks/Holthouse Reservoir and GCID Main Canal)	LS	LS	LS	LS	LS	N/A	N/A
Construction on Currently Dry Land and Other General Construction Activities	LS	LS	LS	LS	LS	N/A	N/A
Operations of Facilities with Open Water Surfaces (Sites, Holthouse, and TRR, and the GCID and Tehama-Colusa)	LS	LS	LS	LS	LS	N/A	N/A
Operations of Delevan Pipeline Intake/Discharge Facilities	LS	LS (N/A for intake facilities)	LS	LS	LS	N/A	N/A
Operations of Facilities on Dry Land	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
8. Fluvial Geomorphology and Riparian Habitat							
Impact Geom-1: Substantial Alteration of Natural River Geomorphic Processes							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Geom-2: Substantial Alteration of Natural River Meandering, Bank Erosion, and Deposition, and Substantial Alteration of Riparian Vegetation and Habitat Complexity							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Geom-3: Substantial Alteration of the Amount of Large Woody Debris, Boulders, Shaded Riverine Aquatic Habitat, or Spawning Gravel in Rivers, with Effects on Fish Habitat							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
9. Flood Control							
Impact Flood-1: Substantially Alter the Existing Drainage Pattern of the Site or Project 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 Flooding On- or Off-site							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Flood-2: Place within a 100-year Flood Hazard Area Structures Which Could Impede or Redirect Flood Flows							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Sites Reservoir Inundation Area, Sites Reservoir Dams, Recreation Areas	LS	LS	LS	LS	LS	N/A	N/A
Sites Pumping/Generating Plant, Tunnel, Sites Reservoir Inlet/Outlet Structure, Sites Electrical Switchyard, Field Office Maintenance Yard, Road Relocations and South Bridge, GCID Main Canal Facilities Modifications, Holthouse Reservoir Complex, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, GCID Main Canal Connection to TRR, TRR Pipeline, TRR Pipeline Road, Sites/Delevan Overhead Power Line, Delevan Pipeline Electrical Switchyard, Delevan Pipeline, Delevan Pipeline Discharge Facilities	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Intake Facilities	LS	N/A	LS	LS	LS	N/A	NA
Project Buffer	LS	LS	LS	LS	LS	N/A	N/A
Impact Flood-3: Expose People or Structures to a Significant Risk of Loss, Injury, or Death from Flooding, Including Flooding As a Result of the Failure of a Levee or Dam							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Primary Study Area							
Sites Reservoir Inundation Area, Sites Reservoir Dams, Delevan Pipeline Electrical Switchyard, Holthouse Reservoir Complex, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, GCID Main Canal Connection to TRR, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Discharge Facilities	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Discharge Facilities	LS	N/A	LS	LS	LS	N/A	N/A
Sites Pumping/Generating Plant, Tunnel, Sites Reservoir Inlet/Outlet Structure, Sites Electrical Switchyard, Field Office Maintenance Yard, Recreation Areas, Road Relocations and South Bridge, GCID Main Canal Facilities Modifications, Sites/Delevan Overhead Power Line, Delevan Pipeline, Project Buffer	LS	LS	LS	LS	LS	N/A	N/A
10. Groundwater Resources							
Impact GW Res-1: Substantial Depletion of Groundwater Supplies or Substantial Interference with Groundwater Recharge Resulting in a Net Deficit in Aquifer Volume or a Lowering of the Local Groundwater Table Level, Causing Effects on Existing Land Uses or Planned Uses							
Extended Study Area	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	N/A	N/A
Secondary Study Area							
Reservoir Storage/Flow Regime Changes and Surface Water Use	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	N/A	N/A
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Recreation Areas, Project Buffer, GCID Main Canal Facilities Modifications	LS	LS	LS	LS	LS	N/A	N/A
Sites Reservoir Inundation Area, Sites Reservoir Dams, Road Relocations and South Bridge, Holthouse Reservoir Complex, TRR Electrical Switchyard, GCID Main Canal Connection to TRR, TRR Pipeline, TRR Pipeline Road, Sites Pumping/Generating Plant, Sites Electrical Switchyard, Tunnel, Sites Reservoir Inlet/Outlet Structure, Field Office Maintenance Yard, TRR, TRR Pumping/Generating Plant, Delevan Pipeline, Delevan Pipeline Electrical Switchyard, Sites/Delevan Overhead Powerline, Delevan Pipeline Discharge Facilities	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Intake Facilities	LS	N/A	LS	LS	LS	N/A	N/A
Impact GW Res-2: Increases in Groundwater Levels Resulting in Adverse Effects on Environmental Conditions and Existing Land Uses or Planned Uses							
Extended Study Area	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	N/A	N/A
Secondary Study Area							
Reservoir Storage/Flow Regime Changes and Surface Water Use	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	N/A	N/A
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Primary Study Area							
Sites Reservoir Inundation Area, Sites Reservoir Dams, Project Buffer, Holthouse Reservoir Complex, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Discharge Facilities, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, GCID Main Canal Connection to TRR, Delevan Pipeline, Delevan Pipeline Electrical Switchyard, Sites/Delevan Overhead Power Line	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Intake Facilities	LS	N/A	LS	LS	LS	N/A	N/A
Recreation Areas, Road Relocations and South Bridge, Sites Pumping/Generating Plant, GCID Main Canal Facilities Modifications	LS	LS	LS	LS	LS	N/A	N/A
11. Groundwater Quality							
Impact GW Qual-1: A Violation of Any Groundwater Quality Standards or Waste Discharge Requirements, a Change in Groundwater Quality Resulting in Adverse Effects to Designated Beneficial Uses of Groundwater, or Otherwise Substantially Degrade Groundwater Quality							
Extended Study Area							
Groundwater Use, Construction, San Luis Reservoir	LS	LS	LS	LS	LS	N/A	N/A
Level 4 Wildlife Refuge Water Use	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	N/A	N/A
Secondary Study Area							
Changes in Groundwater Flow Directions	LS	LS	LS	LS	LS	N/A	N/A
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A
Hazardous Materials	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Holthouse Reservoir Complex, Sites Pumping/Generating Plant, Sites Electrical Switchyard, Tunnel from Sites Pumping/Generating Plant to Sites Reservoir Inlet/Outlet Structure, Sites Reservoir Inlet/Outlet Structure, Field Office Maintenance Yard, Recreation Areas, GCID Main Canal Facilities Modifications, Sites Reservoir Dams, Sites Reservoir Inundation Area, Project Buffer	LS	LS	LS	LS	LS	N/A	N/A
Road Relocations and South Bridge, TRR, TRR Pipeline, TRR Pipeline Road, TRR Pumping/Generating Plant, TRR Electrical Switchyard, GCID Main Canal Connection to TRR, Sites/Delevan Overhead Power Line, Delevan Pipeline and Delevan Pipeline Electrical Switchyard, Delevan Pipeline Discharge Facilities	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Intake Facilities	LS	N/A	LS	LS	LS	N/A	N/A
12. Aquatic Biological Resources							
Impact Fish-1: A Substantial Adverse Effect (Either Directly, through Habitat Modifications, by Interfering with the Movement of Native Fish Species, or by Impeding the Use of Native Fish Nursery/Rearing Sites) on Any Fish Species of Management Concern, Including Species Identified As a Candidate, Sensitive, or Special-status Species in Local or Regional Plans, Policies, or Regulations, or by CDFW, NMFS, or USFWS							
Extended and Secondary Study Area							
Wildlife Refuges, Refuge Water Supply	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Reservoir Cold-water Fish Species, Reservoir Warm-water Fish Species, Southern Oregon/Northern California Coho Salmon, Upper Klamath-Trinity River Fall-run and Spring-run Chinook Salmon, Klamath Mountains Province Steelhead, Green Sturgeon, White Sturgeon, Pacific Lamprey, Striped Bass, Delta Smelt, Longfin Smelt, River Lamprey, Hardhead, American Shad, Sacramento Splittail, Largemouth Bass, Southern Resident Killer Whale, Central Valley Steelhead	LS	LS	LS	LS	LS	N/A	N/A
Sacramento River Winter-run and Spring-run Chinook Salmon, Central Valley Fall-run and Late Fall-run Chinook Salmon	Beneficial/S (diversions)	Beneficial/S (diversions)	Beneficial/S (diversions)	Beneficial/S (diversions)	Beneficial/S (diversions)	Fish-1f: Sites Reservoir Diversion Restrictions for Pulse Flow Protection and Entrainment Minimization	LS
Primary Study Area							
Sites Reservoir Inundation Area, Sites Reservoir Dams, Sites Reservoir Inlet/Outlet Structure, Sites Pumping/Generating Plant, Holthouse Reservoir Complex	S	S	S	S	S	Fish-1a: Implement Habitat Restoration Actions – Stone Corral and Funks Creeks	LS
Road Relocations and South Bridge, TRR to Funks Creek Pipeline, Delevan Pipeline	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Discharge Facilities	S	S	S	S	S	Fish-1b: Implement Habitat Restoration Actions – Sacramento River Fish-1c: Perform In-water Pile Driving July through September during Daylight Hours – Sacramento River Fish-1d: Design Fish Screen in Compliance with NMFS and CDFW Criteria – Sacramento River Fish-1e: Prepare and Implement a Fish Salvage and Rescue Plan – Sacramento River Fish-1f	LS
Delevan Pipeline Intake Facilities	S	N/A	S	S	S	Fish-1b, Fish-1c, Fish-1d, Fish-1e, Fish-1f	LS
13. Botanical Resources							
Impact Bot-1: A Substantial Adverse Effect, Including Conversion to Non-native Vegetation, on Any Riparian Habitat or Other Sensitive Natural Community Identified in Local or Regional Plans, Policies, Regulations, or by CDFW or USFWS, or Any Native Plant Community Known to Be Rare, Unusual, or Becoming Uncommon in the Biogeographic Region of the Project							
Extended Study Area							
Wildlife Refuge Water Use	LS	LS	LS	LS	LS	N/A	N/A
San Luis Reservoir	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity Lake, Shasta Lake, Lake Oroville, Folsom Lake	LS	LS	LS	LS	LS	N/A	N/A
Trinity River, Klamath River Downstream of Trinity River, Spring Creek, Lewiston Lake, Whiskeytown Lake, Keswick Reservoir, Lake Natoma, Thermalito Complex, Clear Creek, San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A
Sacramento River, Sacramento-San Joaquin Delta, Suisun Bay, Feather River, American River	LS	LS	LS	LS	LS	N/A	N/A
Sutter Bypass and Yolo Bypass	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Primary Study Area							
Sites Reservoir Inundation Area, Sites Reservoir Dams							
Annual Grassland Valley Edges, Salt Lake Wetlands and Construction Staging Area, Blue Oak Woodland, Valley Oak Woodland, Riparian Vegetation	S	S	S	S	S	Bot-1a: Implement Compensatory Mitigation Measures for Vegetation Community Impacts in Coordination with USFWS, CDFW, CNPS, and USACE	LS
Valley Floor, Other Land Cover	LS	LS	LS	LS	LS	N/A	N/A
Recreation Areas							
Annual Grassland, Blue Oak Woodland	S ⁺	S ⁺	S ⁺	S ⁺	S	Bot-1a	LS
Chamise, Other Land Cover	LS	LS	LS	LS	LS	N/A	N/A
Road Relocations and South Bridge							
Annual Grassland, Blue Oak Woodland, Riparian Vegetation	S	S	S	S	S	Bot-1a	LS
Chamise, Mixed Chaparral, Other Land Cover	LS	LS	LS	LS	LS	N/A	N/A
Sites Pumping/Generating Plant, Sites Electrical Switchyard, Sites Reservoir Inlet/Outlet Structure, and Field Office Maintenance Yard							
Annual Grassland, Riparian Vegetation, Other Land Cover	LS	LS	LS	LS	LS	N/A	N/A
Holthouse Reservoir Complex							
Annual Grassland, Alkaline Wetland, Riparian Vegetation	S	S	S	S	S	Bot-1a, Bot-1b: Conduct Groundwater Hydrological Studies	LS
Other Land Cover	LS	LS	LS	LS	LS	N/A	N/A
GCID Main Canal Facilities Modifications	LS	LS	LS	LS	LS	N/A	N/A
TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, GCID Main Canal Connection to TRR	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline, TRR Pipeline, TRR Pipeline Road, and Delevan Pipeline Electrical Switchyard							
Alkaline Wetland, Other Land Cover	LS	LS	LS	LS	LS	N/A	N/A
Freshwater Emergent Marsh	S	S	S	S	S	Bot-1a	LS
Sites/Delevan Overhead Power Line							
Annual Grassland	LS	LS	LS	LS	LS	N/A	N/A
Riparian Vegetation	S	S	S	S	S	Bot-1a	LS
Other Land Cover Types	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Discharge Facilities							
Riparian Scrub	LS	LS	LS	LS	LS	N/A	N/A
Fremont Cottonwood Forest	S	S	S	S	S	Bot-1a	LS
Riparian Scrub	LS	N/A	LS	LS	LS	N/A	N/A
Fremont Cottonwood Forest	S	N/A	S	S	S	Bot-1a	LS
Delevan Pipeline Intake Facilities							
Riparian Scrub	LS	N/A	LS	LS	LS	N/A	N/A
Fremont Cottonwood Forest	S	N/A	S	S	S	Bot-1a	LS

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Project Buffer							
Annual Grassland, Blue Oak Woodland, Canal, Chamise, Ponds, Valley and Foothill Riparian	S	S	S	S	S	Bot-1a	LS
Agriculture, Urban/Disturbed Land	LS	LS	LS	LS	LS	N/A	N/A
Impact Bot-2: 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 CDFW or USFWS							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Sacramento River, Feather River, American River, Sacramento-San Joaquin Delta, Suisan Bay	LS	LS	LS	LS	LS	N/A	N/A
Trinity Lake, Shasta Lake, Lake Oroville, Folsom Lake, Sutter Bypass, Yolo Bypass	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	N/A	N/A
Lewiston Lake, Whiskeytown Lake, Keswick Reservoir, Lake Natoma, Thermalito Complex, Trinity River, Klamath River Downstream of the Trinity River, Spring Creek, Clear Creek, San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Sites Reservoir Inundation Area, Sites Reservoir Dams, Road Relocations and South Bridge, Delevan Pipeline, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Electrical Switchyard, Sites/Delevan Overhead Power Line, Project Buffer	S	S	S	S	S	Bot-2: Conduct Preconstruction Surveys for Special-status plants; If Found, Compensate According to USFWS, CDFW, and CNPS Guidelines	LS
Recreation Areas	S ⁺	S ⁺	S ⁺	S ⁺	S	Bot-2	
Holthouse Reservoir Complex	S	S	S	S	S	Bot-1b, Bot-2	LS
GCID Main Canal Facilities Modifications, Sites Pumping/Generating Plant, Sites Electrical Switchyard, Sites Reservoir Inlet/Outlet Structure, Field Office Maintenance Yard	LS	LS	LS	LS	LS	N/A	N/A
TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, GCID Main Canal Connection to TRR	LS	LS	LS	LS	LS	N/A	
Delevan Pipeline Intake/Discharge Facilities	LS	N/A	LS	LS	LS	N/A	N/A
Impact Bot-3: An Increase in Potential for the Invasion or Spread of Noxious Weed Species							
Extended Study Area							
Wildlife Refuge Water Use	LS	LS	LS	LS	LS	N/A	N/A
San Luis Reservoir	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity Lake, Shasta Lake, Lake Oroville, Folsom Lake, Trinity River, Klamath Downstream of Trinity River, Spring Creek, Lewiston Lake, Whiskeytown Lake, Clear Creek, Keswick Reservoir, Lake Natoma, Thermalito Complex, San Pablo Bay, San Francisco Bay, Sutter Bypass, Yolo Bypass	LS	LS	LS	LS	LS	N/A	N/A
Sacramento River, Sacramento-San Joaquin Delta, Suisun Bay, Feather River, American River	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Primary Study Area							
Sites Reservoir Inundation Area, Sites Reservoir Dams, Road Relocations and South Bridge, Sites Pumping/Generating Plant, Sites Electrical Switchyard, Sites Reservoir Inlet/Outlet Structure, Field Office Maintenance Yard, Holthouse Reservoir Complex, Delevan Pipeline Discharge Facilities, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Electrical Switchyard, Project Buffer	S	S	S	S	S	Bot-3a: Implement Preventive Actions by Following Weed Control BMPs, Minimize Exposed Ground, Reduce Weed Seed by Removal of Onsite and Offsite Weeds	LS
Delevan Pipeline Intake Facilities	S	N/A	S	S	S		
Recreation Areas	S ⁺	S ⁺	S ⁺	S ⁺	S		
GCID Main Canal Facilities Modifications, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, GCID Main Canal Connection to TRR	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline, Sites/Delevan Overhead Power Line	S	S	S	S	S	Bot-3b: Implement Avoidance Measures in Areas Adjacent to the Delevan National Wildlife Refuge	LS
Impact Bot-4: Indirect Impacts to Native Plants from Human Disturbance							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Road Relocations and South Bridge, Holthouse Reservoir Complex, Delevan Pipeline, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Electrical Switchyard, Project Buffer	S ⁺	S	S	S	S	Bot-2	LS
Recreation Areas	S ⁺	S ⁺	S ⁺	S ⁺	S	Bot-2	LS
Sites Reservoir Inundation Area, Sites Reservoir Dams, Sites Pumping/Generating Plant, Sites Electrical Switchyard, Sites Reservoir Inlet/Outlet Structure, Field Office Maintenance Yard, Sites/Delevan Overhead Power Line, Delevan Pipeline Discharge Facilities	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Intake Facilities	LS	N/A	LS	LS	LS	N/A	N/A
GCID Main Canal Facilities Modifications, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, GCID Main Canal Connection to TRR	LS	LS	LS	LS	LS	N/A	N/A
Impact Bot-5: Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local or Regional Habitat Conservation Plan, or Conflict with any Local Policies or Ordinances Protecting Biological Resources, Such As a Tree Preservation Policy or Ordinance							
Extended Study Area, Secondary Study Area, and Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
14. Terrestrial Biological Resources							
Impact Wild-1: A Substantial Adverse Effect, Including Alteration of Habitat Suitability, on Any Wildlife Habitat, Especially Riparian Habitat or Other Sensitive Natural Communities Identified in Local or Regional Plans, Policies, Regulations, or by CDFW or USFWS							
Extended Study Area							
Agricultural, Municipal, and Industrial Water Use	LS	LS	LS	LS	LS	N/A	N/A
Wildlife Refuge Water Use	LS	LS	LS	LS	LS	N/A	N/A
San Luis Reservoir	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Secondary Study Area							
Trinity Lake, Shasta Lake, Lake Oroville, Folsom Lake, Lewiston Lake, Whiskeytown Lake, Keswick Reservoir, Clear Creek, Lake Natoma, Thermalito Complex, Spring Creek, San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A
Trinity River, Klamath River Downstream of the Trinity River, Sacramento River, Sutter Bypass, Yolo Bypass, Feather River, American River, Sacramento-San Joaquin Delta, Suisun Bay	LS	LS	LS	LS	LS	N/A	N/A
Sacramento River	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Sites Reservoir Inundation Area, Sites Reservoir Dams							
Annual Grassland, Blue Oak Woodland, Dryland Grain and Seed Crops, Pasture, Valley Foothill Riparian, and Valley Oak Woodland	S	S ⁺	S ⁺	S ⁺	S ⁺	Wild-1a: Confirm Species/Habitat Presence through Appropriately Timed Surveys per Protocols Identified in Coordination with USFWS and CDFW Wild-1b: Identify and Implement a Combination of Habitat Protection, Enhancement, Restoration, or Conservation Easement Measures, in Consultation with USFWS, CDFW, and USACE	LS
Lacustrine – Inundation and Water Level Fluctuations	LS	LS	LS	LS	LS	N/A	N/A
Urban/Disturbed	LS	LS	LS	LS	LS	N/A	N/A
Recreation Areas and Associated Electrical Distribution Lines							
Annual Grassland, Blue Oak Woodland	S ⁺	S ⁺	S ⁺	S ⁺	S	Wild-1a, Wild-1b	LS
Chamise-Redshank Chaparral, Lacustrine	LS	LS	LS	LS	LS	N/A	N/A
Road Relocations and South Bridge							
Annual Grassland, Blue Oak Woodland, Chamise-Redshank Chaparral, Dryland Grain and Seed Crops, Mixed Chaparral, Valley Foothill Riparian	S	S	S	S	S	Wild-1a, Wild-1b	LS
Canal	LS	LS	LS	LS	LS	N/A	N/A
Lacustrine, Urban/Disturbed	LS	LS	LS	LS	LS	N/A	N/A
Sites Pumping/Generating Plant, Sites Electrical Switchyard, Sites Reservoir Inlet/Outlet Structure, Field Office Maintenance Yard							
Annual Grassland, Valley Foothill Riparian	S	S	S	S	S	Wild-1a, Wild-1b	LS
Lacustrine, Urban/Disturbed	LS	LS	LS	LS	LS	N/A	N/A
Tunnel from Sites Pumping/Generating Plant to Sites Reservoir Inlet/Outlet Structure	LS	LS	LS	LS	LS	N/A	N/A
Holthouse Reservoir Complex							
Annual Grassland, Dryland Grain and Seed Crops, Fresh Emergent Wetland, Irrigated Row and Field Crops, Valley Foothill Riparian	S	S	S	S	S	Wild-1a, Wild-1b	LS
Canal, Lacustrine, Urban/Disturbed	LS	LS	LS	LS	LS	N/A	N/A
GCID Main Canal Facilities Modifications	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, GCID Main Canal Connection to TRR							N/A
Canal	LS	LS	LS	LS	LS	N/A	N/A
Urban/Disturbed, Deciduous Orchard	LS	LS	LS	LS	LS	N/A	N/A
Dryland Grain and Seed Crops, Pasture, Rice	S	S	S	S	S	Wild-1a, Wild-1b	LS
Delevan Pipeline, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Electrical Switchyard							
Canal	LS	LS	LS	LS	LS	N/A	N/A
Barren, Dryland Grain and Seed Crops, Eucalyptus, Fresh Emergent Wetland, Lacustrine, Irrigated Row and Field Crops, Pasture, Rice	S	S	S	S	S	Wild-1a, Wild-1b	LS
Deciduous Orchard, Urban/Disturbed	LS	LS	LS	LS	LS	N/A	N/A
Sites/Delevan Overhead Power Line							
Annual Grassland, Barren, Dryland Grain and Seed Crops, Valley Foothill Riparian	S ⁺	S ⁺	S ⁺	S ⁺	S	Wild-1a, Wild-1b	LS
Canal	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Intake Facilities							
Canal, Urban/Disturbed	LS	N/A	LS	LS	LS	N/A	N/A
Deciduous Orchard, Riverine (Valley Foothill Riparian)	S	N/A	S	S	S	Wild-1a	LS
Project Buffer							
Annual Grassland, Barren, Blue Oak Woodland, Canal, Chamise-Redshank Chaparral, Lacustrine, Valley Foothill Riparian, Deciduous Orchard, Dryland Grain and Seed Crops, Irrigated Row and Field Crops, Pasture, Rice	S	S	S	S	S	Wild-1a, Wild-1b	LS
Urban/Disturbed	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Discharge Facilities							
Canal, Urban/Disturbed	LS	LS	LS	LS	LS	N/A	N/A
Deciduous Orchard, Riverine (Valley Foothill Riparian)	S	S	S	S	S	Wild-1a	LS
Impact Wild-2: A Substantial Adverse Effect, Including Mortality, 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 CDFW or USFWS							
Extended Study Area							
Agricultural, Municipal, and Industrial Water Use, San Luis Reservoir	LS	LS	LS	LS	LS	N/A	N/A
Wildlife Refuge Water Use	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity Lake, Shasta Lake, Lake Oroville, Folsom Lake, Lewiston Lake, Whiskeytown Lake, Keswick Reservoir, Spring Creek, Clear Creek, Lake Natoma, Thermalito Complex, San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Trinity River, Klamath River Downstream of the Trinity River, Sacramento River, Sutter Bypass, Yolo Bypass, Feather River, American River, Sacramento-San Joaquin Delta, Suisun Bay	LS	LS	LS	LS	LS	N/A	N/A
Sacramento River							
Pump Installation at Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A
Operation	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Sites Reservoir Inundation Area, Sites Reservoir Dams							
Migratory Birds and Roosting Bats	S	S ⁺	S ⁺	S ⁺	S ⁺	Wild-2a: Prepare and Implement a Bird and Bat Conservation Strategy	LS
Bald Eagle	S	S ⁺	S ⁺	S ⁺	S ⁺	Wild-2b: Obtain Permit for Bald Eagle Nest Tree Removal, Remove Nest Tree Outside of Breeding Season, and Create Habitat	LS
Golden Eagle	S	S ⁺	S ⁺	S ⁺	S ⁺	Wild-2e: Implement Avoidance and Minimization Measures at Historical or Active Golden Eagle Nest Sites; Conduct Satellite Telemetry Studies Pre- and Post-construction to Determine Territory Size; Prepare a Golden Eagle Protection and Monitoring Plan; Mitigate for Loss of Annual Grassland Foraging Habitat.	SU
Valley Elderberry Longhorn Beetle	S	S	S	S	S	Wild-2g: Implement Protective Actions to Avoid or Minimize Impacts to Elderberry Plants; Where Avoidance Is Not Possible, Transplant or Replace Plants, According to USFWS Guidelines	LS
Western Burrowing Owl	S	S ⁺	S ⁺	S ⁺	S ⁺	Wild-2g: Conduct Preconstruction Surveys for Western Burrowing Owls; If Owls Are Found, Implement Protective Actions	LS
Western Pond Turtle	S	S ⁺	S ⁺	S ⁺	S ⁺	Wild 2i: Conduct Preconstruction Surveys and Provide a Biological Monitor during Project Construction for the Western Pond Turtle; If Found, Turtles Shall Be Captured and Relocated by a Qualified Biologist	LS
Recreation Areas and Associated Electrical Distribution Lines							
Golden Eagle	S	S	S	S ⁺	S	Wild-2e	SU
Road Relocations and South Bridge							
Migratory Birds and Roosting Bats	S ⁺	S ⁺	S ⁺	S ⁺	S	Wild-2a	LS
Valley Elderberry Longhorn Beetle	S ⁺	S ⁺	S ⁺	S ⁺	S	Wild-2g	LS
Western Burrowing Owl	S ⁺	S ⁺	S ⁺	S ⁺	S	Wild-2h	LS
Sites Pumping/Generating Plant, Sites Electrical Switchyard, Sites Reservoir Inlet/Outlet Structure, Field Office Maintenance Yard							
Migratory Birds and Roosting Bats	S	S	S	S	S	Wild-2a	LS
Tunnel from Sites Pumping/Generating Plant to Sites Reservoir Inlet/Outlet Structure	LS	LS	LS	LS	LS	N/A	N/A
Holthouse Reservoir Complex							
Water-dependent Bird Species	LS	LS	LS	LS	LS	N/A	N/A
Western Pond Turtle	S	S	S	S	S	Wild-2i	LS

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	Alternative ^b						
	A	B	C	C ₁	D		
GCID Main Canal Facilities Modifications							
Giant Garter Snake	S	S	S	S	S	Wild-2d: Conduct Preconstruction Surveys for Giant Garter Snakes and Implement Protective Actions; Conduct Project Construction Activity Between May 1 and October 1 in Giant Garter Snake Habitat; Compensate for Temporary Disturbance of Habitat According to USFWS Guidelines	LS
Delevan Pipeline, Terminal Regulating Reservoir Pipeline, Terminal Regulating Reservoir Pipeline Road, and Delevan Pipeline Electrical Switchyard							
Migratory Birds and Roosting Bats	S	S	S	S	S	Wild-2a	LS
Bank Swallow	S	S	S	S	S	Wild-2c: Implement Protective Actions to Prevent Bank Swallows from Nesting in the Cut Banks of Project Construction Trenches	LS
Giant Garter Snake	S	S	S	S	S	Wild-2d	LS
Western Pond Turtle	S	S	S	S	S	Wild-2i	LS
Western Yellow-billed Cuckoo	LS	LS	LS	LS	LS	N/A	N/A
Sites/Delevan Overhead Power Line	LS	LS	LS	LS	LS	NA	N/A
Delevan Pipeline Intake Facilities							
Bank Swallow	LS	N/A	LS	LS	LS	N/A	N/A
Ringtail	S	N/A	S	S	S	Wild-2f: Implement Protective Actions to Minimize Impacts to the Ringtail, and Restore Connectivity of Riparian Corridor Wild-3c: Restore Riparian Habitat Connectivity	LS
Valley Elderberry Longhorn Beetle	S	N/A	S	S	S	Wild-2g	LS
Western Yellow-billed Cuckoo	S	N/A	S	S	S	Wild-2j: Conduct Preconstruction Surveys for the Western Yellow-billed Cuckoo and Schedule Construction Activities to Avoid Impacts to Nest Sites	LS
Project Buffer	S	S	S	S	S	Wild-1a, Wild-1b, Wild-2a	LS
Delevan Pipeline Discharge Facilities							
Bank Swallow	LS	LS	LS	LS	LS	N/A	N/A
Ringtail	S	S	S	S	S	Wild-2e, Wild-3c	LS
Valley Elderberry Longhorn Beetle	S	S	S	S	S	Wild-2f	LS
Western Yellow-billed Cuckoo	S	S	S	S	S	Wild-2i	LS
Impact Wild-3: Substantial Interference with the Movement of any Native Resident or Migratory Wildlife Species, or with Established Native Resident or Migratory Wildlife Corridors, or Impede the Use of Native Wildlife Nursery Sites							
Extended Study Area							
Agricultural, Municipal, and Industrial Water Use, San Luis Reservoir	LS	LS	LS	LS	LS	N/A	N/A
Wildlife Refuge Water Use	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity Lake, Shasta Lake, Lake Oroville, Folsom Lake, Lewiston Lake, Whiskeytown Lake, Keswick Reservoir, Spring Creek, Clear Creek, Lake Natoma, Thermalito Complex, San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Trinity River, Klamath River Downstream of the Trinity River, Sacramento River, Sutter Bypass, Yolo Bypass, Feather River, American River, Sacramento-San Joaquin Delta, Suisun Bay	LS	LS	LS	LS	LS	N/A	N/A
Sacramento River							
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A
Operation	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Sites Reservoir Inundation Area, Sites Reservoir Dams	LS	LS	LS	LS	LS	N/A	N/A
Recreation Areas	LS	LS	LS	LS	LS	N/A	N/A
Road Relocations and South Bridge	LS	LS	LS	LS	LS	N/A	N/A
Sites Pumping/Generating Plant, Sites Electrical Switchyard, Sites Reservoir Inlet/Outlet Structure, Field Office Maintenance Yard	LS	LS	LS	LS	LS	N/A	N/A
Tunnel from Sites Pumping/Generating Plant to Sites Reservoir Inlet/Outlet Structure	LS	LS	LS	LS	LS	N/A	N/A
Holthouse Reservoir Complex	LS	LS	LS	LS	LS	N/A	N/A
GCID Main Canal Facilities Modifications	LS	LS	LS	LS	LS	N/A	N/A
TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, GCID Main Canal Connection to TRR	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline, TRR Pipeline, TRR Pipeline Road, and Delevan Pipeline Electrical Switchyard	S	S	S	S	S	Wild-3a: During Project Construction, Backfill Trenches within 72 Hours of Pipeline Installation and Provide an Escape Ramp for Trapped Wildlife	LS
Sites/Delevan Overhead Power Line	S ⁺	S	S ⁺	S ⁺	S	Wild-3b: Construct Overhead Power Lines and Associated Equipment Following Suggested Practices for Avian Protection on Power Lines	LS
Delevan Pipeline Intake Facilities	S	N/A	S	S	S	Wild-3c	LS
Project Buffer	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Discharge Facilities	S	S	S	S	S	Wild-3c	LS
Impact Wild-4: Indirect Effects on Common Wildlife from Human Disturbance							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Wild-5: Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Other Approved Local or Regional Habitat Conservation Plan, or Conflict with any Local Policies or Ordinances Protecting Biological Resources, Such As a Tree Preservation Policy or Ordinance							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
15. Wetlands and Other Waters							
Impact Wet-1: A Permanent Change in the Use or Quality (Extent in Acres or Miles) of "Other Waters" (Including, but not Limited to, Lakes, Rivers, Streams Tributary to Navigable Rivers, Natural Ponds, Canals, or Ditches) %hat Are Determined by the USACE to Be Jurisdictional, through Direct Removal, Filling, Obstruction, Hydrological Interruption, or Other Means							
Extended Study Area							
Wildlife Refuge Water Use	LS	LS	LS	LS	LS	N/A	N/A
San Luis Reservoir	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity Lake, Shasta Lake, Lake Oroville, Folsom Lake, Lewiston Lake, Whiskeytown Lake, Keswick Reservoir, Thermalito Complex, Lake Natoma, Sacramento River, Spring Creek, Clear Creek, Sacramento-San Joaquin Delta, Suisun Bay, Pump Installation at the Red Bluff Pumping Plant, Trinity River and Klamath River Downstream of the Trinity River, Feather River, Sutter Bypass	LS	LS	LS	LS	LS	N/A	N/A
San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Sites Reservoir Inundation Area, Sites Reservoir Dams							
Streams	S	S	S	S	S	Wet-1a: Implement Compensatory Mitigation Measures for Streams Pursuant to USACE and State Determination within the Watershed in Which the Impacts Occur	LS
Stock Ponds	S	S	S	S	S	Wet-1c: Restore Ponds to Original Condition, or Implement Other Compensatory Mitigation Measures Pursuant to USACE Determination within the Same Hydrologic Unit in Which the Ponds Occur	LS
Recreation Areas							
Streams	S ⁺	S ⁺	S ⁺	S ⁺	S	Wet-1a	LS
Ponds	S ⁺	S ⁺	S ⁺	S ⁺	S ⁺	Wet-1c	LS
Road Relocations and South Bridge							
Streams	S	S	S	S	S	Wet-1a	LS
Ponds	LS	LS	LS	LS	LS	N/A	N/A
Sites Pumping/Generating Plant, Sites Electrical Switchyard, Tunnel, Sites Reservoir Inlet/Outlet Structure, Field Maintenance Office							
Streams	S	S	S	S	S	Wet-1a	LS
Ponds	LS	LS	LS	LS	LS	N/A	N/A
Holthouse Reservoir Complex							
Streams	S	S	S	S	S	Wet-1a	LS
Funks Reservoir	S	S	S	S	S	Wet-1c	LS
TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, GCID Main Canal Connection to TRR							
Ditches and Canals	LS	LS	LS	LS	LS	N/A	N/A
Sites/Delevan Overhead Power Line							
Streams	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Ponds	LS	LS	LS	LS	LS	N/A	N/A
TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Electrical Switchyard, Delevan Pipeline							
Streams	S	S	S	S	S	N/A	N/A
Ponds	S	S	S	S	S	Wet-1c	LS
Ditches and Canals	S	S	S	S	S	Wet-1b: Reroute Drainage Ditches and Canals to Ensure Continued Hydrological Connection, or Implement Other Compensatory Mitigation Measures Pursuant to USACE Determination	LS
Delevan Pipeline Intake Facilities							
Streams	S	N/A	S	S	S	Wet-1a	LS
Project Buffer	LS	LS	LS	LS	LS	N/A	LS
Delevan Pipeline Discharge Facilities							
Streams	S	S	S	S	S	Wet-1a	LS
Impact Wet-2: A Permanent Adverse Effect to Federal- or State-Protected Wetlands (As Defined by Section 404 of the Clean Water Act [Including, but Not Limited to, Marsh, Vernal Pool, Coastal]) through Direct Removal, Filling, Hydrological Interruption, Discharge of Pollutants, or Other Means							
Extended Study Area							
Wildlife Refuge Water Use, San Luis Reservoir	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity River, Klamath River Downstream of the Trinity River, Trinity Lake, Shasta Lake, Lake Oroville, Folsom Lake, Lewiston Lake, Whiskeytown Lake, Keswick Reservoir, Feather River, Thermalito Complex, Lake Natoma, Sacramento River, Spring Creek, Clear Creek, Sacramento-San Joaquin Delta, Suisun Bay	LS	LS	LS	LS	LS	N/A	N/A
Sutter Bypass, Yolo Bypass, American River	LS	LS	LS	LS	LS	N/A	N/A
San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Sites Reservoir Inundation Area, Sites Reservoir Dams							
Seasonal Wetlands	S	S ⁺	S ⁺	S ⁺	S ⁺	Wet-2a: Conserve, Enhance, Restore, or Create Seasonal Wetlands, or Implement Other Compensatory Mitigation Measures per USACE Determination within the Watershed in Which the Impacts Occur	LS
Alkaline Wetlands and Salt Lake Pond	S	S	S	S	S	Wet-2b: Conserve, Enhance, Restore, or Create Alkaline Wetlands, or Implement Other Compensatory Mitigation Measures Pursuant to USACE Determination within the Watershed in Which the Impacts Occur	LS
Vernal Pools	S	S	S	S	S	Wet-2c: Conserve, Enhance, Restore, or Create Vernal Pools Equivalent to the Type of Vernal Pools Adversely Impacted, or Implement Other Compensatory Mitigation Measures Pursuant to USACE Determination	LS
Emergent Wetlands	S	S	S	S	S	Wet-2d: Conserve, Enhance, Restore, or Create Emergent Wetlands, or Implement Other Compensatory Mitigation Measures Pursuant to USACE Determination within the Watershed in Which the Impacts Occur	LS

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Riparian Wetlands	S	S	S	S	S	Wet-2e: Conserve, Enhance, Restore, or Create Comparable Riparian Wetlands in the Inner Coast Range Foothills, or Implement Other Compensatory Mitigation Measures Pursuant to CDFW Determination	LS
Recreation Areas							
Seasonal Wetlands	S ⁺	S ⁺	S ⁺	S ⁺	S	Wet-2a	LS
Road Relocations and South Bridge							
Seasonal Wetlands	LS	LS	LS	LS	LS	N/A	N/A
Alkaline Wetlands	LS	LS	LS	LS	LS	N/A	N/A
Vernal Pools	LS	LS	LS	LS	LS	N/A	N/A
Emergent Wetlands	LS	LS	LS	LS	LS	N/A	N/A
Sites Pumping/Generating Plant, Sites Electrical Switchyard, Tunnel, Sites Reservoir Inlet/Outlet Structure, Field Office Maintenance Yard, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, GCID Main Canal Connection to TRR	LS	LS	LS	LS	LS	N/A	N/A
Holthouse Reservoir Complex							
Alkaline Wetlands	S	S	S	S	S	Wet-2b	LS
Seasonal Wetlands	S	S	S	S	S	Wet-2a	LS
Sites/Delevan Overhead Power Line							
Alkaline Wetlands, Vernal Pools	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Electrical Switchyard							
Alkaline Wetlands	S	S	S	S	S	Wet-2b	LS
Vernal Pools	S	S	S	S	S	Wet-2c	LS
Delevan Pipeline Intake Facilities							
Emergent Wetlands	LS	N/A	LS	LS	LS	N/A	N/A
Project Buffer	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Discharge Facilities	LS	LS	LS	LS	LS	N/A	N/A
16. Geology, Minerals, Soils, and Paleontology							
Geology and Soils							
Impact Geo/Soils-1: Effects on a Geologic Unit or Soil Unit from Project Construction, Operation, and Maintenance							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Geo/Soils-2: Project Construction, Operation, and Maintenance Effects on Soil Erosion and Loss of Topsoil							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Geo/Soils-3: Risks to Life and Property from Project Construction, Operation, and Maintenance on Expansive Soil							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Geo/Soils-4: Project Construction, Operation, and Maintenance Effects on Soils That Are Incapable of Adequately Supporting the Use of Septic Tanks or Alternative Wastewater Disposal Systems Where Sewers Are Not Available for the Wastewater Disposal							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Minerals							
Impact Min-1: Loss of Availability of a Known Mineral Resource That Would Be of Value to the Region and the Residents of the State							
Extended, Secondary, and Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Min-2: Loss of Availability of a Locally Important Mineral Resource Recovery Site Delineated on a Local General Plan, Specific Plan, or Other Land Use Plan							
Extended, Secondary, and Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Min-3: Expose People to Naturally Occurring Asbestos during Project Construction, Operation, or Maintenance							
Extended, Secondary, and Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Paleontology							
Impact Paleo-1: Project Construction, Operation, and Maintenance Effects on Paleontological Resources							
Extended and Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	S	S	S	S	S	Paleo-1a: Retain a Qualified Paleontological Resource Specialist prior to the Start of Construction Paleo-1b: Consultation with the Paleontological Resource Specialist prior to and during Project Construction Paleo-1c: Prepare and Implement a Paleontological Resources Monitoring and Mitigation Plan Paleo-1d: Conduct Paleontological Resources Awareness Training Paleo-1e: Conduct Monitoring during Project Construction and Prepare Monthly Reports Paleo-1f: Ensure Implementation of the Paleontological Resources Monitoring and Mitigation Plan	SU
Recreation Areas	S ⁺	S ⁺	S ⁺	S ⁺	S	Paleo-1a through Paleo-1f	SU
Delevan Pipeline Intake Facilities	S	N/A	S	S	S	Paleo-1a through Paleo-1f	SU
Delevan Pipeline Discharge Facilities	S	S	S	S	S	Paleo-1a through Paleo-1f	SU
Project Buffer	S	S	S	S	S	Paleo-1a through Paleo-1f	SU
17. Faults and Seismicity							
Impact Seis-1: Exposure of People or Structures to Fault Rupture, Seismic Ground Shaking, Seismic-related Ground Failure, Liquefaction, or Landslides							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Seis-2: Inundation by Seiches or Tsunamis							
Extended, Secondary, and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Impact Seis-3: Reservoir-induced Seismicity							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
18. Cultural/Tribal Cultural Resources							
Impact Cul-1: A Substantial Adverse Change in the Significance of an Archaeological Resource							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	S	S	S	S	S	Cul-1a: Avoid Impacts on Historical Resources/Historic Properties Cul-1b: Conduct Archaeological Data Recovery Cul-1c: Conduct Archaeological Construction Monitoring Cul-1d: Immediately Halt Construction If Cultural Resources Are Discovered and Implement a Post-review Discovery Plan Cul-1e: Protection of Archaeological Sites by Capping	LS
Impact Cul-2: A Substantial Adverse Change in the Significance of a Historical Resource of the Built Environment							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
All Primary Study Area Project Facilities (with the exception of intake facilities)	S	S	S	S	S	Cul-1a Cul-2a: Follow the Secretary of the Interior's Standards for the Treatment of Historical Resources/Historic Properties Cul-2b: Record Built Environment Resources	SU (if eligible for CRHR or NRHP listing)
Delevan Pipeline Intake Facilities	S	N/A	S	S	S	Cul-1a, Cul-2a, Cul-2b	SU (if eligible for CRHR or NRHP listing)
Impact Cul-3: Disturb a Traditional Cultural Property or a Tribal Cultural Resource As Defined in PRC Section 21074							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
All Primary Study Area Project Facilities (with the exception of intake facilities)	S	S	S	S	S	Cul-1a Cul-3: Consult with Affected Communities Regarding How to Mitigate for Impacts on TCPs/TCRs	SU (if eligible for CRHR or NRHP listing)
Delevan Pipeline Intake Facilities	S	N/A	S	S	S	Cul-1a, Cul-3	SU (if eligible for CRHR or NRHP listing)
Impact Cul-4: Disturb Human Remains, Including Those Interred Outside of Dedicated Cemeteries							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	S	S	S	S	S	Cul-1a Cul-4a: Relocation of Dedicated or Known Cemeteries Cul-4b: Immediately Halt Construction If Human Remains Are Discovered and Implement a Burial Treatment Plan	SU (if eligible for CRHR or NRHP listing)

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
19. Indian Trust Assets							
Extended, Secondary, and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
20. Land Use							
Impact Land-1: Physical Division of an Established Community							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Sites Reservoir Inundation Area and Sites Reservoir Dams (construction, operation, and maintenance effects on the town of Sites)	S	S	S	S	S	No Feasible Mitigation	SU
Impact Land-2: Conflict with an Applicable Land Use Plan, Policy, or Regulation of an Agency with Jurisdiction over the Project Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Sites Reservoir Inundation Area, and Sites Reservoir Dams, Road Relocations, South Bridge, and TRR Pipeline Road, Sites Pumping/Generating Plant, Sites Electrical Switchyard, Tunnel from Sites Pumping/Generating Plant to Sites Inlet/Outlet Structure, Sites Reservoir Inlet/Outlet Structure, Field Office Maintenance Yard, Asphalt Batch Plant, Holthouse Reservoir Complex, Delevan Pipeline Electrical Switchyard, TRR, TRR Pumping/Generating Plant, GCID Main Canal Connection to TRR, TRR Electrical Switchyard, Delevan Pipeline Discharge Facilities (construction, operation, and maintenance)	S	S	S	S	S	Land-2: Work with Glenn and Colusa Counties to Modify or Amend Counties' General Plans and/or Zoning Ordinances to Bring Lands into Consistency with the Proposed Project Land Uses	SU
Recreation Areas	S ⁺	S ⁺	S ⁺	S ⁺	S	Land-2	SU
Delevan Pipeline Intake Facilities	S	N/A	S	S	S	Land-2	SU
Impact Land-3: 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))							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Land-4: Involve Other Changes in the Existing Environment Which, Because of Their Location or Nature, Could Result in Conversion of Farmland to Non-agricultural Use or Conversion of Forest Land to Non-forest Use							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	LS
Impact Land-5: Changes in Land Use As a Result of Implementing the Alternatives That Are Considered to Be Incompatible with the Existing Land Uses Adjacent to the Project Facilities							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Impact Land-6: 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							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	S	S	S	LS	S	No Feasible Mitigation	SU
Impact Land-7: Permanent Conflict with Existing Zoning for Agricultural Use, and/or the Permanent Conversion of Lands That Have a Williamson Act Contract							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Sites Reservoir Inundation Area, Sites Reservoir Dams, Road Relocations, South Bridge, TRR Pipeline Road, Sites Pumping/Generating Plant, Sites Electrical Switchyard, Tunnel from Sites Pumping/Generating Plant to Sites Inlet/Outlet Structure, Sites Reservoir Inlet/Outlet Structure, Field Office Maintenance Yard, Asphalt Batch Plant, Holthouse Reservoir Complex, Delevan Pipeline Electrical Switchyard, TRR, TRR Pumping/Generating Plant, GCID Main Canal Connection to TRR, TRR Electrical Switchyard, Delevan Pipeline Discharge Facilities (construction, operation, and maintenance)	S	S	S	S	S	Land-7a: Acquire Lands through Eminent Domain or Work with Land Owners to Acquire Properties and Pay Any Cancellation Fees Associated with Removing Lands from Williamson Act Contracts Land-7b: For Land Permanently Acquired Other Than by Eminent Domain, Seek County Approvals to Rescind Williamson Act Contracts and Enter in Open Space Contracts or Open Space Easements	LS
Recreation Areas	S ⁺	S ⁺	S ⁺	S ⁺	S ⁺	Land-7a, Land-7b	LS
Delevan Pipeline Intake Facilities	S	N/A	S	S	S	Land-7a, Land-7b	LS
21. Recreation Resources							
Impact Rec-1: 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							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
All Primary Study Area Project Facilities Except for the Delevan Pipeline Intake/Discharge Facilities	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Intake Facilities	LS	N/A	LS	LS	LS	N/A	N/A
Delevan Pipeline Discharge Facilities	LS	LS	LS	LS	LS	N/A	N/A
Impact Rec-2: Require the Construction or Expansion of Existing Recreational Facilities, Which May Have an Adverse Physical Effect on the Environment							
Extended Study Area							
Wildlife Refuge Water Use, San Luis Reservoir, Other Reservoirs	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Sites Reservoir Complex	LS	LS	LS	LS	LS	N/A	N/A
Impact Rec-3: Reduce Recreation Use Levels at Existing Recreation Facilities by Providing an Alternative New Site for Recreation Visitors							
Extended Study Area							
Wildlife Refuge Water Use, San Luis Reservoir, Other Reservoirs	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Secondary Study Area							
Trinity Lake, Trinity River, Klamath River Downstream of the Trinity River, Shasta Lake, Sacramento River, Clear Creek, Feather River, American River, Sutter Bypass, Yolo Bypass, Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A
Lake Oroville, Folsom Lake, Other Reservoirs	LS	LS	LS	LS	LS	N/A	N/A
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Rec-4: Reduce Recreation Use Levels and/or Recreation Benefits at Existing Reservoirs or Rivers Due to Changes in Operating Criteria							
Extended Study Area							
Other Reservoirs	LS	LS	LS	LS	LS	N/A	N/A
San Luis Reservoir	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity Lake, Shasta Lake, Lake Oroville, Folsom Lake	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	N/A	N/A
Clear Creek, Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, San Francisco Bay, Other Reservoirs, Sacramento River, Feather River	LS	LS	LS	LS	LS	N/A	N/A
Trinity River, Sutter Bypass, Yolo Bypass, American River	LS	LS	LS	LS	LS	N/A	N/A
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Rec-5: Reduce Recreation Use Levels at Existing Recreational Facilities during the Construction Period							
Extended Study Area							
	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Sites Reservoir Inundation Areas, Sites Reservoir Dams, Recreation Areas, Road Relocations and South Bridge, Sites Pumping/Generating Plant, Sites Electrical Switchyard, Tunnel, Sites Reservoir Inlet/Outlet Structure, Field Office Maintenance Yard, Holthouse Reservoir Complex, GCID Main Canal Facilities Modifications, GCID Canal Connection to TRR, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Electrical Switchyard, Project Buffer	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline	LS	LS	LS	LS	LS	N/A	N/A
Sites/Delevan Overhead Power Line	LS	LS	LS	LS	LS	N/A	N/A
Delevan Pipeline Intake Facilities	LS	N/A	LS	LS	LS	N/A	N/A
Delevan Pipeline Discharge Facilities	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Impact Rec 6: Create Hazardous Conditions for Water-based Activities Due to Changes in Operating Criteria							
Extended Study Area							
Wildlife Refuge Water Use, San Luis Reservoir, Other Reservoirs	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity River, Sacramento River, Lake Oroville, Sutter Bypass, Yolo Bypass, American River	LS	LS	LS	LS	LS	N/A	N/A
Trinity Lake, Klamath River Downstream of the Trinity River, Clear Creek, Feather River, Folsom Lake, Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, San Francisco Bay, Other Reservoirs	LS	LS	LS	LS	LS	N/A	N/A
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
22. Socioeconomics							
Impact Socio-1: Substantial Adverse Effects on Regional Economics							
Extended and Secondary Study Areas	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	N/A	N/A
Primary Study Areas	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial		
Impact Socio-2: Substantial Adverse Effects on Population and Housing							
Extended, Secondary, and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Impact Socio-3: Substantial Adverse Effects on Local Government Fiscal Conditions							
Extended, Secondary, and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Impact Socio-4: Substantial Adverse Effects on Recreation Economics							
Extended, Secondary, and Primary Study Areas	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	N/A	N/A
Impact Socio-5: Substantial Adverse Effects on Agricultural Economics							
Extended and Secondary Study Areas	Beneficial	Beneficial	Beneficial	Beneficial	Beneficial	N/A	N/A
Primary Study Areas	LS	LS	LS	LS	LS		
Impact Socio-6: Substantial Adverse Effects on M&I Water Use Economics							
Extended and Secondary Study Areas	Beneficial	Beneficial	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
23. Environmental Justice							
Impact Env Jus-1: A Disproportionate Share of an Adverse Impact (Such As Traffic, Noise, Dust, Hazards, and/or Socioeconomic Effects) on a Minority or Low-income Population, Including the Potential for Minority and/or Low-income Populations to be Disproportionately Affected by Multiple Adverse Exposures Impacts							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Minority and Low-income Populations	LS	LS	LS	LS	LS	N/A	N/A
Job and Recreational Opportunities	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
24. Air Quality							
Impact Air Qual-1: Conflict with an Applicable Air Quality Plan, Contribute Substantially to an Air Quality Violation, and/or Result in a Cumulatively Considerable Net Increase of Nonattainment Pollutants							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	S	S	S	S	S	Air Qual-1a: Develop a Fugitive Dust Control Plan Air Qual-1b: Implement Measures to Reduce Equipment and Vehicle Exhaust Emissions	SU (for emissions of PM ₁₀) SU (for emissions of NO _x , PM ₁₀ , and ROG) LS (for emissions of SO _x , CO, and PM _{2.5})
Impact Air Qual-2: Expose Sensitive Receptors to Substantial Pollutant Concentrations							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Air Qual-3: Create Objectionable Odors Affecting a Substantial Number of People							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
25. Climate Change and Greenhouse Gas Emissions							
Impact GHG-1: Generation of Cumulative GHG Emissions							
Extended, Secondary, and Primary Study Areas							
Construction, Operation, and Maintenance of the Proposed Project	S	S	S	S	S	No Feasible Mitigation	SU
Open Water Surfaces and Tailraces	LS	LS	LS	LS	LS	N/A	N/A
Impact Climate Change – 1: Impact to SWP and CVP Storage and Delta Exports and Groundwater Use							
Extended, Secondary, and Primary Study Areas							
LLT Q5 ^c , LLT Q2 ^d – Modeling Scenarios	Similar ^e compared to EC/NP/NA	Similar compared to EC/NP/NA	Similar compared to EC/NP/NA	Similar compared to EC/NP/NA	Similar compared to EC/NP/NA	N/A	N/A
LLT Q4 ^f – Modeling Scenario	Increased ⁷ compared to EC/NP/NA	Increased compared to EC/NP/NA	Increased compared to EC/NP/NA	Increased compared to EC/NP/NA	Increased compared to EC/NP/NA	N/A	N/A
26. Navigation, Transportation, and Traffic							
Impact Nav-1: Conflict with Navigation along Navigable Waterways							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area (Delevan Complex)	LS	LS	LS	LS	LS	N/A	N/A
Impact Trans-1: Conflict with an Applicable Plan, Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System, Considering All Modes of Transportation							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Trans-2: 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							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Impact Trans-3: Substantially Increase Hazards Due to a Design Feature or Incompatible Uses							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Trans-4: Result in Inadequate Emergency Access							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Trans-5: Conflict with Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycle, or Pedestrian Facilities, or Otherwise Decrease the Performance or Safety of Such Facilities							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
27. Noise							
Impact Noise-1: Expose Persons to or Generation of Noise Levels in Excess of Established Standards							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity Lake, Lewiston Lake, Trinity River, Klamath River Downstream of the Trinity River, Whiskeytown Lake, Spring Creek, Shasta Lake, Keswick Reservoir, Clear Creek, Lake Oroville, Thermalito Complex, Feather River, Sutter Bypass, Yolo Bypass, Folsom Lake, Lake Natoma, American River, Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Noise-2: Expose Persons to or Generation of Excessive Groundborne Vibration or Groundborne Noise Levels							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity Lake, Lewiston Lake, Trinity River, Klamath River Downstream of the Trinity River, Whiskeytown Lake, Spring Creek, Shasta Lake, Keswick Reservoir, Clear Creek, Lake Oroville, Thermalito Complex, Feather River, Sutter Bypass, Yolo Bypass, Folsom Lake, Lake Natoma, American River, Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Noise-3: Result in a Substantial Permanent Increase in Ambient Noise Levels in the Project Vicinity above Levels Existing without the Project							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity Lake, Lewiston Lake, Trinity River, Klamath River Downstream of the Trinity River, Whiskeytown Lake, Spring Creek, Shasta Lake, Keswick Reservoir, Clear Creek, Lake Oroville, Thermalito Complex, Feather River, Sutter Bypass, Yolo Bypass, Folsom Lake, Lake Natoma, American River, Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Noise-4: Result in a Substantial Temporary or Periodic Increase in Ambient Noise Levels in the Project Vicinity above Levels Existing without the Project							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity Lake, Lewiston Lake, Trinity River, Klamath River Downstream of the Trinity River, Whiskeytown Lake, Spring Creek, Shasta Lake, Keswick Reservoir, Clear Creek, Lake Oroville, Thermalito Complex, Feather River, Sutter Bypass, Yolo Bypass, Folsom Lake, Lake Natoma, American River, Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Noise-5: Expose People Residing or Working in the Project Area to Excessive Noise Levels (for a Project Located within an Airport Land Use Plan or, Where Such a Plan Has Not Been Adopted, within 2 Miles of a Public Airport or Public Use Airport)							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Noise 6: Expose People Residing or Working in the Project Area to Excessive Noise Levels (for a Project within the Vicinity of a Private Airstrip)							
Extended, Secondary, and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
28. Public Health and Environmental Hazards							
Impact Pub Health-1: Create a Significant Public or Environmental Hazard from the Routine Transport, Use, or Disposal of Hazardous Materials							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Impact Pub Health-2: Create a Significant Public or Environmental Hazard from the Release of Hazardous Materials into the Environment							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Pub Health-3: Effects from Hazardous Emissions or Hazardous Materials, Substances, or Wastes within 0.25 Mile of an Existing or Proposed School during Project Construction, Operation, or Maintenance							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Impact Pub Health-4: Create a Significant Hazard to the Public or the Environment from the Project Being Located on a Listed Hazardous Materials Site							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Pub Health-5: Effects on Adopted Emergency Response Plan or Emergency Evacuation Plan Implementation							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Impact Pub Health-6: Expose People or Structures to a Significant Risk of Loss, Injury, or Death from Wildland Fires							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Impact Pub Health-7: Create a Safety Hazard for People Residing or Working in the Project Area (If Located in an Area Designated within an Airport Land Use Plan or within 2 Miles of a Public Airport or Public Use Airport If No Plan Has Been Adopted)							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Pub Health-8: Creation of a Safety Hazard for People Residing or Working in the Project Area (If Located within the Vicinity of a Private Airstrip)							
Extended, Secondary, and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Impact Pub Health-9: Expose People to an Increased Risk of Mosquito-borne or Other Vector-borne Illnesses, or Increased Exposure to Nuisance Problems							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS		
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
29. Public Services and Utilities							
Impact Services-1: A Substantial Adverse Physical Impact 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 the Following Public Services: Fire Protection, Police Protection, Schools, Parks, and/or Other Public Facilities, and Disruptions to Local or Regional Utility Services							
Extended, Secondary, and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Impact Services-2: A Decline in Property Tax or Fee Revenues That Would Lead to a Substantial Decrease in Public Services							
Extended Study Area	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area	LS	LS	LS	LS	LS		
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Services-3: Exceed the Wastewater Treatment Requirements of the Applicable Regional Water Quality Control Board							
Extended, Secondary, and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Impact Services-4: The Need for Expansion of Existing Wastewater Treatment, Water Treatment, Stormwater, and/or Landfill Facilities							
Extended, Secondary, and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Impact Services-5: Require New or Expanded Water Supply Entitlements and Resources							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Services-6: Non-compliance with Federal, State, and Local Statutes and Regulations Related to Solid Waste							
Extended, Secondary, and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
30. Visual Resources							
Impact Vis-1: A Substantial Adverse Effect on a Scenic Vista							
Extended, Secondary, and Primary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Impact Vis-2: Substantial Damage to Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway							
Extended Study Area							
Agricultural Water Use, Municipal and Industrial Water Use, and Wildlife Refuge Water Use	LS	LS	LS	LS	LS	N/A	N/A
San Luis Reservoir and Other Reservoirs	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Secondary Study Area							
Trinity Lake, Lewiston Lake, Trinity River, Klamath River Downstream of the Trinity River, Whiskeytown Lake, Spring Creek, Shasta Lake, Keswick Reservoir, Clear Creek, Lake Oroville, Thermalito Complex, Feather River, Sutter Bypass, Yolo Bypass, Folsom Lake, Lake Natoma, American River, Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
	LS	LS	LS	LS	LS	N/A	N/A
Impact Vis-3: Substantial Degradation of the Existing Visual Character or Quality of the Site and Its Surroundings							
Extended Study Area							
Agricultural Water Use, Municipal and Industrial Water Use, and Wildlife Refuge Water Use	LS	LS	LS	LS	LS	N/A	N/A
San Luis Reservoir and Other Reservoirs	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity Lake, Lewiston Lake, Trinity River, Klamath River Downstream of the Trinity River, Whiskeytown Lake, Spring Creek, Shasta Lake, Keswick Reservoir, Clear Creek, Lake Oroville, Thermalito Complex, Feather River, Sutter Bypass, Yolo Bypass, Folsom Lake, Lake Natoma, American River, Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area							
Sites Reservoir Complex, Holthouse Reservoir Complex, Delevan Complex, Overhead Power Lines, and Project Buffer	LS	LS	LS	LS	LS	N/A	N/A
TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Electrical Switchyard, GCID Main Canal Connection to TRR	LS	LS	LS	LS	LS	N/A	N/A
Impact Vis-4: A New Source of Substantial Light or Glare That Would Adversely Affect Day or Nighttime Views in the Area							
Extended Study Area							
	LS	LS	LS	LS	LS	N/A	N/A
Secondary Study Area							
Trinity Lake, Lewiston Lake, Trinity River, Klamath River Downstream of the Trinity River, Whiskeytown Lake, Spring Creek, Shasta Lake, Keswick Reservoir, Clear Creek, Lake Oroville, Thermalito Complex, Feather River, Sutter Bypass, Yolo Bypass, Folsom Lake, Lake Natoma, American River, Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, San Francisco Bay	LS	LS	LS	LS	LS	N/A	N/A
Pump Installation at the Red Bluff Pumping Plant	LS	LS	LS	LS	LS	N/A	N/A

Impact	Anticipated Impact in Comparison to Existing Conditions/No Action/No Project Condition Prior to Mitigation ^a					Recommended Mitigation Measure	Level of Significance after Mitigation
	Alternative ^b						
	A	B	C	C ₁	D		
Primary Study Area							
Sites Reservoir Complex, Holthouse Reservoir Complex, TRR Complex, Delevan Complex, Overhead Power Lines, Project Buffer	LS	LS	LS	LS	LS	N/A	N/A
31. Power Production and Energy							
Impact Power-1: Inefficient, Wasteful, or Unnecessary Consumption of Energy during Construction, Maintenance, and Recreation Activities							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Power-2: Inefficient, Wasteful, or Unnecessary Consumption of Energy during Operational Activities							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A
Impact Power-3: A Substantial Reduction in the Generation of Renewable Energy							
Extended and Secondary Study Areas	LS	LS	LS	LS	LS	N/A	N/A
Primary Study Area	LS	LS	LS	LS	LS	N/A	N/A

^aPotential significant impacts (and where appropriate the relative degree of potential impact) are identified to present a relative comparison between alternatives where applicable. Generally, potentially significant impacts among alternatives were identified as comparatively greater if indicated by a "+" based on a broad-level assessment of the area affected (both permanent and temporary), the potential for resources to be present and be impacted, and the type and quantity of facilities required for a given alternative.

^bAlternative C₁ is substantially the same as Alternative C but without the capability to generate hydropower. Therefore, potential impacts associated with Alternative C₁ are only discussed in Chapter 24 Air Quality, Chapter 25 Climate Change and Greenhouse Gas Emissions, and Chapter 31 Power Production and Energy.

^cLLT Q5 scenario assuming the median (Q5) of an ensemble of GCM projections at approximately 2060 and a sea level rise of 45 centimeters (18 inches).

^dLLT Q2 scenario assuming the "drier, more warming" lower bound (Q2) of an ensemble of GCM projections at approximately 2060 and a sea level rise of 45 centimeters (18 inches).

^e"Increase" would result in improved conditions for other water-dependent resources such as aquatic biological resources; all other resources would be similar.

^fLLT Q4 scenario assuming the "wetter, less warming" upper bound (Q4) of an ensemble of GCM projections at approximately 2060 and a sea level rise of 45 centimeters (18 inches).

Notes:

Alternative B only includes the discharge facilities, not the intake facilities.

BMP = best management practice

CDFW = California Department of Fish and Wildlife

CNPS = California Native Plant Society

CO = carbon monoxide

CRHR = California Register of Historic Resources

EC/NP/NA = Existing Conditions/No Project/No Action Condition

GCM = global climate model

LLT = late long-term

LS = less than significant

NMFS = National Marine Fisheries Service

NRHP = National Register of Historic Places

N/A = not applicable

PRC = Public Resources Code

PM_{2.5} = particulate matter less than 2.5 microns in diameter

S = significant

SO_x = oxides of sulfur

SU = significant and unavoidable

TCP = traditional cultural properties

TCR = tribal cultural resources

USACE = U.S. Army Corps of Engineers