

Executive Summary

ES.1 Introduction

This executive summary provides background information for the Sites Reservoir Project (Project), identifies the purpose of preparing this Revised Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS), describes the Project alternatives considered, and identifies the environmental effects that would result under each alternative. The environmental effects are evaluated in accordance with the requirements of the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA), and mitigation measures are recommended where applicable. The Sites Project Authority (Authority) is the lead agency under CEQA and U.S. Department of the Interior, Bureau of Reclamation (Reclamation) is the lead agency under NEPA.

ES.2 Project Background

The Project would construct an offstream reservoir to capture excess water from major storms and store the water until it is most needed during dry periods. These saved water supplies would be used for the environment, people, and farms. Existing water storage facilities were designed to capture snowmelt, but precipitation in present-day California occurs more commonly in the form of rain. This trend is likely to continue in climate change conditions. The state's demand for water to serve communities, fuel the economy, and revitalize the environment has increased far beyond what the water storage system was designed to support. To meet these new challenges, the Project has long been envisioned as one tool in a toolbox of actions to assist the State of California in achieving the goals of water supply reliability for all users (including the environment) and adaptation to a changing climate.

The Project was first identified by CALFED as a potential surface water storage project in 2000. In its Record of Decision (ROD), CALFED proposed the Project as part of a suite of storage projects that could help improve water supply reliability, provide water for the environment at times when it is needed most, provide flows for water quality maintenance, and protect levees through coordination with existing flood control reservoirs.

The Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1) authorized \$7.545 billion in general obligation bonds to fund ecosystem and watershed protection and restoration; water supply infrastructure projects, including surface water and groundwater storage; and drinking water protection. Proposition 1 water supply infrastructure funding is administered by the California Water Commission (CWC) through the Water Storage Investment Program (WSIP). Through a rigorous selection process, the CWC issued approximately \$816 million of Proposition 1 funds to the Project for its flood control, ecosystem improvement, and public recreation benefits. The CWC approved a request by the Authority to

provide a portion of the Project's funding early to help complete environmental planning and permitting documents. Through remaining WSIP process steps, the CWC will determine whether all required feasibility studies, permits, and environmental documentation have been completed prior to determining the Project's final funding award.

The federal government has also recognized the challenges facing existing water infrastructure and in 2016 passed the Water Infrastructure Improvements for the Nation Act (WIIN Act). Under the WIIN Act, Reclamation can participate in surface water storage projects that are constructed, operated, and maintained by a State agency or agency organized pursuant to State law and provide a benefit in meeting any obligation under federal law, including regulations. As of January 2021, \$24.05 million has been appropriated to Reclamation under the WIIN Act to advance the Project. The Project was determined feasible by the Secretary of the Interior in December 2020, thereby allowing the Project to continue to receive funding under the WIIN Act.

In 2019, Governor Newsom signed Executive Order N-10-19, which requires the preparation, by the California Natural Resources Agency, the California Environmental Protection Agency, and the California Department of Food and Agriculture, in consultation with the California Department of Finance, of a water resilience portfolio that meets the needs of California's communities, economy, and environment through the 21st century. The *2020 Water Resilience Portfolio* (Portfolio) was completed in July 2020 and identifies the need to expand smart surface water storage where it can benefit water supply reliability and the environment. To achieve that goal, the Portfolio proposes the acceleration of State permitting for projects selected under the WSIP that protect and enhance fish and wildlife resources and water supply reliability. The Portfolio specifically identifies the Project as one of the smart water storage projects that should qualify for such expedited permitting.

The Authority and Reclamation prepared a Public Draft EIR/EIS for the Project in 2017 (2017 Draft EIR/EIS) that evaluated four surface water reservoir size and conveyance alternatives. All four alternatives included a reservoir to be filled using existing Sacramento River diversion facilities and a Delevan Pipeline on the Sacramento River to allow for release of flows into the river. In October 2019, the Authority initiated a value planning process to identify and evaluate additional alternatives that could make the Project more affordable for the Sites Storage Partners¹ while also addressing comments received on the 2017 Draft EIR/EIS. The value planning process focused on the following primary objectives: (1) improving water supply and water supply reliability; (2) providing incremental Level 4 water supply for refuges; (3) improving the survival of anadromous fish; and (4) enhancing the Sacramento–San Joaquin Delta (Delta) ecosystem. Secondary objectives of the value planning process were to provide opportunities for flood damage reduction and recreation. Refinements from the value planning process resulted in three new alternatives, which include reservoir sizes from 1.3 to 1.5 million acre-feet (MAF) and focus on using existing facilities to the extent practical for diversions to and releases from the reservoir. This RDEIR/SDEIS evaluates the environmental effects of these new alternatives.

¹ The governmental agencies, water organizations, and others who have funded and received a storage allocation in Sites Reservoir and the resulting water supply or water supply-related environmental benefits from the Sites Reservoir Project. Storage Partners could include local agencies, the State of California, and the federal government.

There are several differences in the facilities and operational characteristics between the alternatives evaluated in this RDEIR/SDEIS (Alternatives 1, 2, and 3) and the alternatives evaluated in the 2017 Draft EIR/EIS. A comparison of the current Alternatives 1, 2, and 3 to the smallest and largest reservoir alternatives evaluated in the 2017 Draft EIR/EIS (Alternatives A and D, respectively) highlights the primary differences between the alternatives evaluated in this RDEIR/SDEIS and those analyzed in 2017:

- Elimination of the Delevan Facility on the Sacramento River and conveyance pipeline in Alternatives 1, 2, and 3 as compared to Alternatives A and D.
- Elimination of Holthouse Reservoir and existing transmission line realignments in Alternatives 1, 2, and 3 as compared to Alternatives A and D.
- Elimination of dedicated pump/generation hydropower facilities in Alternatives 1, 2, and 3 as compared to Alternatives A and D.
- Fewer saddle dams in Alternatives 1, 2, and 3 as compared to Alternative D.
- Change in location of the spillway on a saddle dam (8B) in Alternatives 1, 2, and 3 as compared to Alternatives A and D.
- New conveyance facilities, including an underground Dunnigan Pipeline, for discharge into CBD in Alternatives 1 and 3 as compared to Alternatives A and D.
- New conveyance facilities, including an underground Dunnigan Pipeline and the Sacramento River discharge, from TC Canal to the Sacramento River in Alternative 2 as compared to Alternatives A and D.
- New operation for Alternatives 1, 2, and 3 as compared to Alternatives A and D, including bypass flows; pulse flow protection measure to be applied to precipitation-generated pulse flow events from October through May; Wilkins Slough bypass flow; and Fremont Weir notch criteria.

Additional information about the differences between the alternatives can be found in Appendix 2B, *Additional Alternatives Screening and Evaluation*.

ES.3 Document Overview

ES.3.1 Purpose of this RDEIR/SDEIS

The Authority and Reclamation have prepared this RDEIR/SDEIS because the value planning process identified Project alternatives involving facilities and operations that were different than originally proposed in the 2017 Draft EIR/EIS, and those differences may be relevant to environmental concerns. According to the State CEQA Guidelines, a lead agency may recirculate a draft EIR for additional comments if “significant new information” (California Code of Regulations, Title 14, Section 15088.5.) is added to the document after the publication of the draft EIR but before certification. NEPA’s implementing regulations require that a supplemental EIS be prepared if there are “substantial changes to the proposed action that are relevant to environmental concerns” or “significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts” (Code of Federal

Regulations [CFR], Title 40, Section 1502.9(d)). This RDEIR/SDEIS provides a project-level analysis that focuses on potential environmental impacts associated with construction, operation, and maintenance of the Project alternatives and mitigation measures that can minimize or avoid such impacts.

ES.3.2. Intended Use of this RDEIR/SDEIS

The intended use of this RDEIR/SDEIS is to disclose the potential direct, indirect, and cumulative impacts of implementing the Project in accordance with CEQA and NEPA requirements. This RDEIR/SDEIS serves as an informational document for decision makers, public agencies, nongovernmental organizations (NGOs), and the general public regarding the potential direct, indirect, and cumulative environmental consequences of implementing any of the alternatives. This document will be used by the following agencies:

- **The Authority.** The Authority will review and consider this RDEIR/SDEIS, including the comments on the revised document, to understand the potential environmental impacts, alternatives, and mitigation measures before deciding whether and how to approve the Project.
- **Reclamation.** Reclamation will review and consider this RDEIR/SDEIS, including the comments on the revised document, to understand the potential environmental impacts, alternatives, and mitigation measures before deciding whether to participate in the Project and issue approvals and agreements for the Project.
- **The CWC.** The CWC will use information in this RDEIR/SDEIS in combination with the Feasibility Report currently being drafted by the Authority to determine if the Project remains eligible for Proposition 1 funding. In addition, the CWC will use this RDEIR/SDEIS, including the comments on the revised document, in combination with future Project permits and agreements to approve the Project's final funding award.

A number of agencies may also use this RDEIR/SDEIS to issue permits or other regulatory approvals. Tables 4-1 through 4-3 in Chapter 4, *Regulatory and Environmental Compliance*, identify agencies that may use this RDEIR/SDEIS.

ES.4 Scoping and Public Involvement Process

The scoping and public involvement process for the Project began in 2001 when the California Department of Water Resources (DWR) published a Notice of Preparation (NOP) for an EIR under CEQA and Reclamation issued a Notice of Intent to prepare an EIS under NEPA. This was followed by a scoping process in January 2002. After the Authority assumed the role of CEQA lead agency in 2016, it issued a supplemental NOP in February 2017 and conducted two additional scoping meetings during that same month. During both the 2002 and 2017 scoping periods, the public was invited to submit written comments regarding the scope, content, and format of the environmental document. Reports documenting both the original and supplemental scoping processes are included in Appendix 33B, *Previous Scoping Processes*, of this RDEIR/SDEIS.

The Authority and Reclamation released the 2017 Draft EIR/EIS in August. The release of this public draft was noticed through a CEQA Notice of Availability on August 14, 2017, and through publication of the Notice of Availability in the Federal Register on August 18, 2017. The 2017 Draft EIR/EIS was available for public and agency review and comment from August 14, 2017, to January 15, 2018 (i.e., public review period). A total of 137 comment letters and emails were received on the 2017 Draft EIR/EIS, along with comments received at two public hearings held during the public review period. A summary of the issues raised in these comments can be found in Section 1.3.2, *Comments Received on the 2017 Draft EIR/EIS*. Additional comments were received after the close of the public review period that generally raised similar issues and concerns to those received during the public review period. All letters with comments on the 2017 Draft EIR/EIS, including those received after the public review period ended, have been reviewed. The Authority and Reclamation have taken into consideration all comments in developing the refined alternatives and impact analyses presented in this RDEIR/SDEIS.

In addition to the scoping and public involvement processes required by CEQA and NEPA, Reclamation and the Authority have continued to meet with stakeholders, interested parties, Tribes, and State and federal regulatory agencies. This includes required consultation with federal agencies, State agencies, and Tribes, as well as coordination with NEPA Cooperating Agencies and CEQA Responsible and Trustee Agencies. Reclamation and the Authority have also coordinated with Native American representatives, other government entities, NGOs, and landowners to keep them informed of Project progress and to solicit input on the Project. A series of one-on-one and group meetings have been held with NGOs and other interested parties since 2017. A summary of these consultation, coordination, and outreach activities can be found in Section 33.1, *Consultation and Coordination*.

ES.5 Project Overview

The Project would involve the construction and operation of an offstream surface water reservoir to provide direct and real benefits to instream flows, the Delta ecosystem, and water supply reliability. The reservoir inundation area would be in rural, unincorporated areas of Glenn and Colusa Counties, and Project components would be located in Tehama County, Glenn County, Colusa County, and Yolo County. Figure ES-1 shows the county boundaries; cities, towns, and communities; and primary waterbodies (e.g., main canals, Sacramento River, Colusa Basin Drain [CBD]) in the Project area. Figures ES-2 and ES-3 show the reservoir footprint in Antelope Valley, towns, and smaller creeks (e.g., Funks Creek, Stone Corral Creek, and Hunters Creek).

The Project would use existing infrastructure to divert unregulated and unappropriated flow from the Sacramento River at Red Bluff and Hamilton City and convey the water to a new offstream reservoir west of the community of Maxwell, California. New and existing facilities would move water into and out of the reservoir, with ultimate release back to the Sacramento River system via existing canals and a new pipeline located near Dunnigan. Water released from Sites Reservoir would be used to benefit local, State, and federal water use needs, including public water agencies, anadromous fish species in the Sacramento River watershed, wildlife refuges and habitats, and the Yolo Bypass to help supply food for delta smelt (*Hypomesus transpacificus*). At the time of publication of this RDEIR/SDEIS, there are 23 Storage Partners representing local and regional water delivery agencies that serve over 24.5 million people and over 500,000 acres

of farmland. Figure ES-4 shows the service areas of Storage Partners in the Project. In addition, the State of California and Reclamation are also considering participating in the Project as Storage Partners.

Construction of the Sites Reservoir would necessitate construction of a bridge or bypass road to connect Maxwell with the community of Lodoga. Additional components would include future development of new recreation facilities at the reservoir.

ES.6 CEQA Objectives and NEPA Purpose and Need

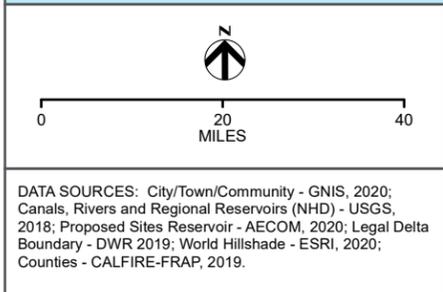
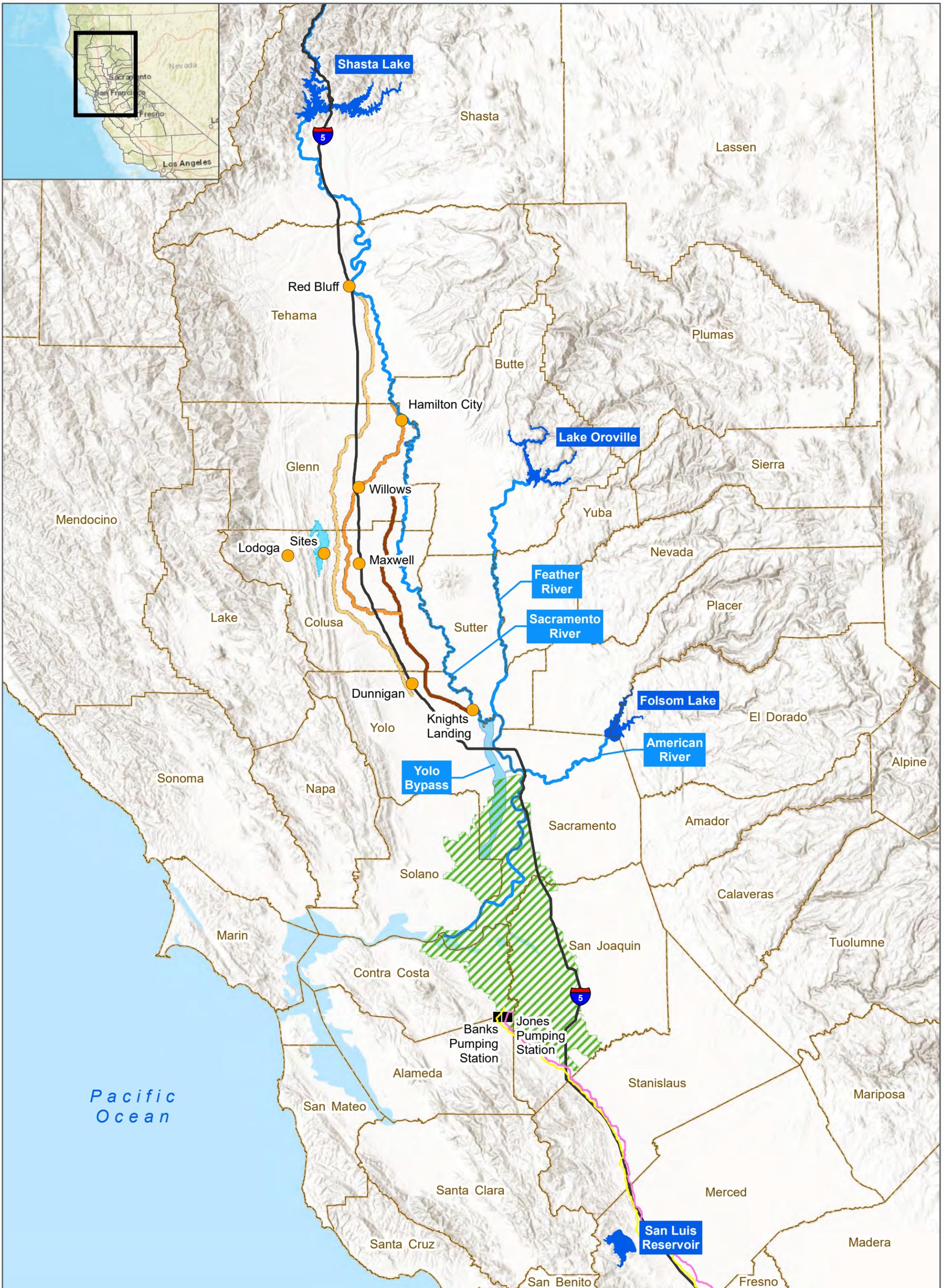
The Project is the construction and operation of a surface water reservoir in accordance with the Project's CEQA objectives and NEPA purpose and need.

The CEQA objectives are as follows:

- OBJ-1: Improve water supply reliability and resiliency to meet Storage Partners' agricultural and municipal long-term average annual water demand in a cost-effective manner for all Storage Partners, including those that are the most cost-sensitive.
- OBJ-2: Provide public benefits consistent with Proposition 1 of 2014 and use WSIP funds to improve statewide surface water supply reliability and flexibility to enhance opportunities for habitat and fisheries management for the public benefit through a designated long-term average annual water supply.
- OBJ-3: Provide public benefits consistent with the WIIN Act of 2016 by using federal funds, if available, provided by Reclamation to improve Central Valley Project (CVP) operational flexibility in meeting CVP environmental and contractual water supply needs and improving cold pool management in Shasta Lake to benefit anadromous fish.
- OBJ-4: Provide surface water to convey biomass from the floodplain to the Delta to enhance the Delta ecosystem for the benefit of pelagic fishes in the north Delta (e.g., Cache Slough).
- OBJ-5: Provide local and regional amenities, such as developing recreational facilities, reducing local flood damage, and maintaining transportation connectivity through roadway modifications.

Reclamation has identified the Project need as providing offstream surface water storage north of the Delta in a manner that is consistent with WIIN Act requirements and Reclamation law. The NEPA purpose of the Project is to provide:

- Increased water supply and improved reliability of water deliveries.
- Increased CVP operational flexibility.
- Benefits to anadromous fish by improving CVP operations consistent with the laws, regulations, and requirements in effect at the time of operation.
- Incremental Level 4 water supply for CVP Improvement Act (CVPIA) refuges.
- Delta ecosystem enhancement by providing water to convey food resources.



DATA SOURCES: City/Town/Community - GNIS, 2020; Canals, Rivers and Regional Reservoirs (NHD) - USGS, 2018; Proposed Sites Reservoir - AECOM, 2020; Legal Delta Boundary - DWR 2019; World Hillshade - ESRI, 2020; Counties - CALFIRE-FRAP, 2019.

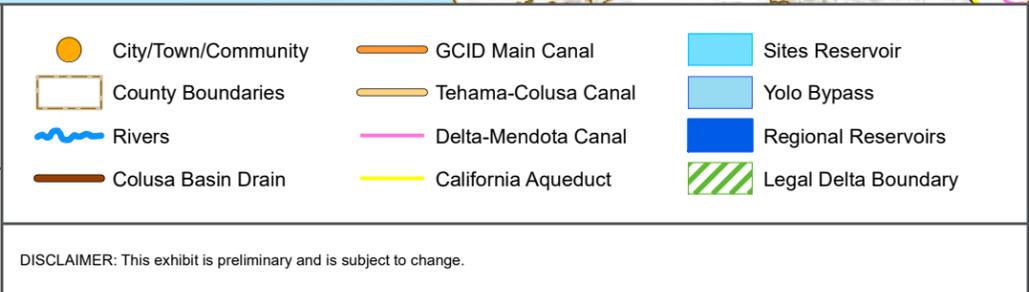
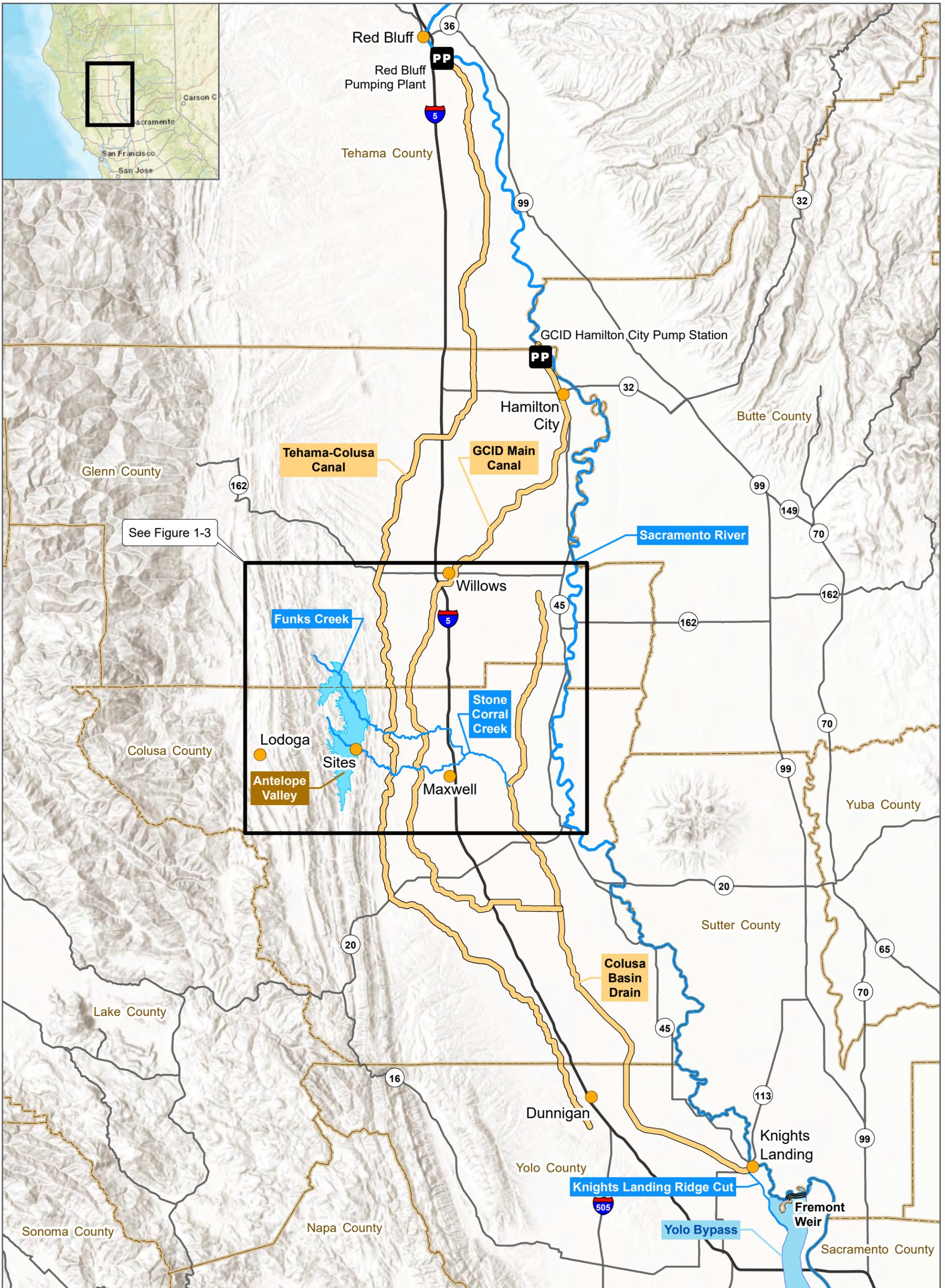


FIGURE ES-1
REGIONAL MAP

MAP DATE: 6/24/2021



See Figure 1-3



Pumping Plant



City/Town/Community



County Boundaries



River



Canal



Creek/Slough



Sites Reservoir

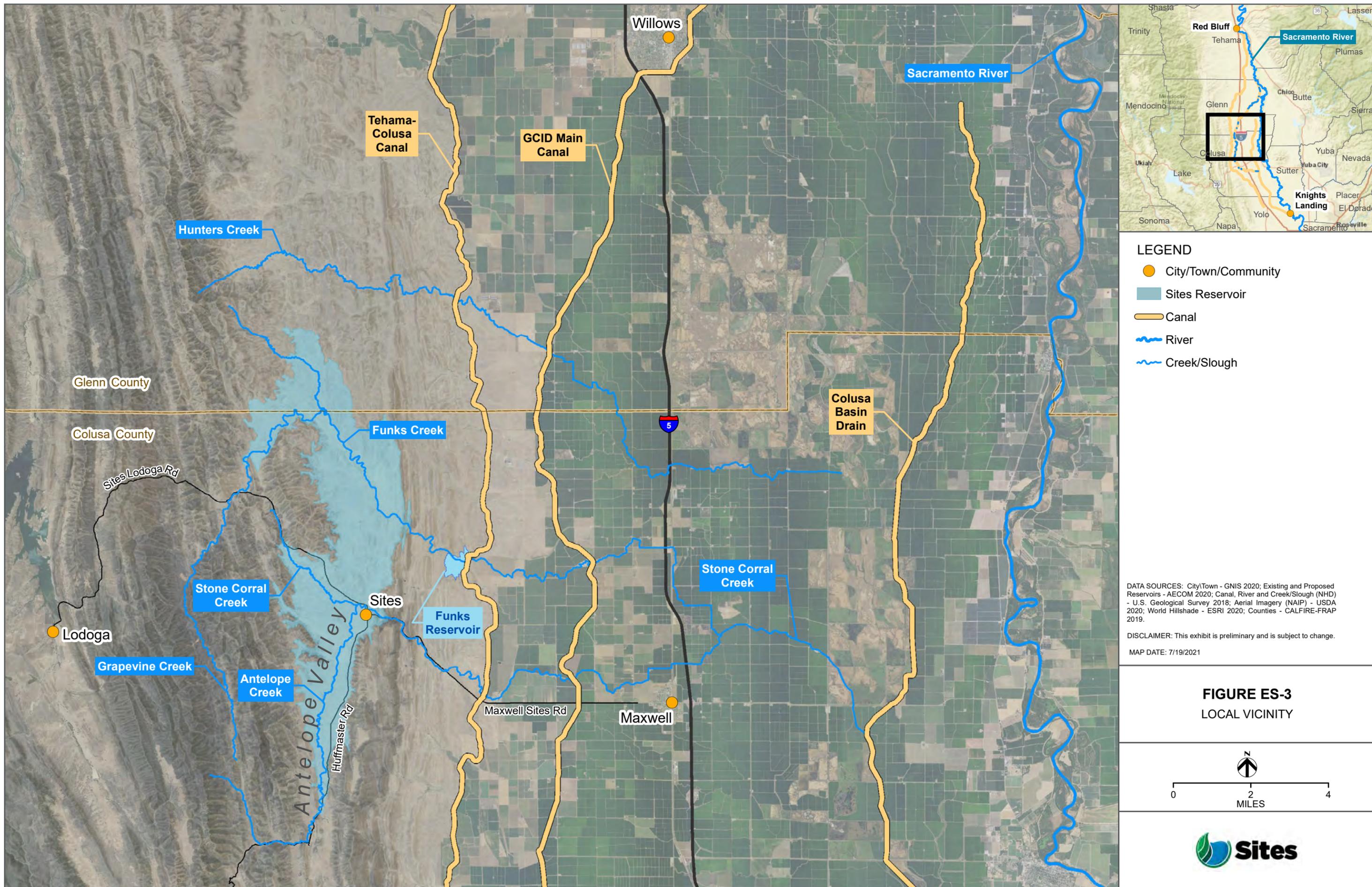
FIGURE ES-2
VICINITY MAP

DATA SOURCES: Pumping Plants - ICF, 2020; City/Town - GNIS, 2020; Canal, River and Creek/Slough (NHD) - USGS, 2018; Proposed Sites Reservoir - AECOM, 2020; World Hillshade - ESRI, 2020; Counties - CALFIRE-FRAP, 2019.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 7/19/2021





LEGEND

- City/Town/Community
- Sites Reservoir
- Canal
- River
- Creek/Slough

DATA SOURCES: City/Town - GNIS 2020; Existing and Proposed Reservoirs - AECOM 2020; Canal, River and Creek/Slough (NHD) - U.S. Geological Survey 2018; Aerial Imagery (NAIP) - USDA 2020; World Hillshade - ESRI 2020; Counties - CALFIRE-FRAP 2019.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 7/19/2021

FIGURE ES-3
LOCAL VICINITY

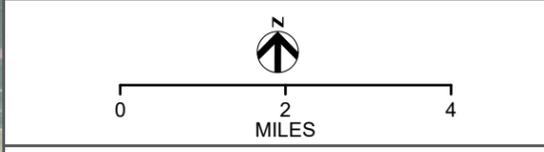




Figure ES-4
Sites Reservoir Project Storage Partners Service Areas

ES.7 Project Alternatives

CEQA and NEPA require that an EIR and EIS, respectively, consider a reasonable range of alternatives that would attain most of the basic project objectives while avoiding or substantially lessening the significant environmental effects of a proposed project. The reasonable range of feasible alternatives evaluated in this RDEIR/SDEIS is the product of an extensive screening process that has occurred over several decades and involved multiple distinct water resource planning efforts. Those planning efforts considered a wide variety of factors, including feasibility and opportunities for reducing significant impacts while meeting applicable program and Project objectives and purpose and need. The alternatives development process is described in detail in Section 2.1, *Alternatives Development Process*, of this RDEIR/SDEIS.

Consistent with NEPA standards, the three action alternatives (i.e., Alternatives 1, 2, and 3) described in this RDEIR/SDEIS are analyzed at an equal level of detail. A No Project or No Action Alternative as required under CEQA and NEPA, respectively, has been included in this RDEIR/SDEIS. More detail about the No Project or No Action Alternative terminology can be found in Section 3.2.1, *Existing Conditions and No Project Alternative*.

The following sections describe the alternatives analyzed in this RDEIR/SDEIS.

ES.7.1. No Project Alternative

The purpose of the No Project or No Action Alternative is to serve as a benchmark against which the effects of the action alternatives may be evaluated. For CEQA, the no project analysis must discuss the existing conditions at the time the notice of preparation is published, as well as what would be reasonably expected to occur in the foreseeable future if the CEQA lead agency (in this case, the Authority) were not to adopt and implement a project. For NEPA, *no action* is defined as those conditions that would result if the federal lead agency (in this case, Reclamation) does not undertake any actions related to the proposed project and continues existing operations with no changes.

For this RDEIR/SDEIS, the term *No Project Alternative* describes both the No Project Alternative and No Action Alternative for CEQA and NEPA purposes, respectively. Because no new facilities would be constructed or operated, the No Project Alternative would not materially change conditions as compared to existing conditions, and this RDEIR/SDEIS assumes the same regulatory criteria as existing conditions. In addition, DWR's projected future land use and water use through 2030 are used for the No Project Alternative, which assumes that the majority of the CVP and State Water Project (SWP) water contractors would use their total contract amounts and that most senior water rights users would also fully use most of their water rights, depending on hydrologic condition. 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 this RDEIR/SDEIS, constitute the No Project Alternative.

ES.7.2. Action Alternatives

Three action alternatives (Alternatives 1, 2, and 3) that are based on the results of the value planning process are analyzed in this RDEIR/SDEIS. These three alternatives have many common elements, including the use of existing infrastructure to divert unappropriated flow from the Sacramento River, the release of Sites Reservoir water back to the river when needed, and the

construction of two new recreation areas and a boat ramp. The common elements among action alternatives are described in Section ES.7.2.1. The defining characteristics of each alternative are shown in Table ES-1. The action alternatives are described further in Sections ES.7.2.2 (Alternative 1), ES.7.2.3 (Alternative 2), and ES.7.2.4 (Alternative 3).

Table ES-1. Defining Characteristics of Action Alternatives

Project Element	Alternative 1	Alternative 2	Alternative 3
Sites Reservoir Size	1.5 million acre-feet (MAF)	1.3 MAF	Same as Alternative 1
Inundation Area	13,200 acres	12,600 acres	Same as Alternative 1
Dams (scaled to the size of the reservoir)	Golden Gate and Sites Dams; 7 saddle dams; 2 saddle dikes	Golden Gate and Sites Dams; 4 saddle dams; 3 saddle dikes	Same as Alternative 1
Route Connecting East and West Sides of Reservoir	Permanent bridge crossing the reservoir	Paved roadway along south side of reservoir	Same as Alternative 1
Regulating Reservoirs	Funks Reservoir Terminal Regulating Reservoir (TRR) East	Funks Reservoir TRR West	Same as Alternative 1
Conveyance Releases	Releases 1,000 cubic feet per second (cfs) into new Dunnigan Pipeline discharging into the Colusa Basin Drain (CBD)	Releases of up to 1,000 cfs into new Dunnigan Pipeline discharging into the Sacramento River with an average of 300 cfs partial discharge into the CBD	Same as Alternative 1
Releases into Funks Creek and Stone Corral Creek	Specific flow criteria to maintain flows to protect downstream water right holders and ecological function	Same as Alternative 1	Same as Alternative 1
Reclamation Involvement	Two options: <ul style="list-style-type: none"> Operational exchanges¹ only (Alternative 1A); or Funding partner (up to 7% investment) with operational exchanges¹ (Alternative 1B) 	Operational exchanges ¹ only	Funding partner (up to 25% investment) with operational exchanges ¹
DWR Involvement	Operational Exchanges with Oroville and use of SWP facilities South-of-Delta	Same as Alternative 1 (volumes may vary, however)	Similar to Alternative 1 (volumes may vary, however)

¹Operational exchanges could include within-year exchanges and real-time exchanges.

It should be noted that the Authority and Reclamation could decide to approve a version of one of these alternatives that incorporates elements from one or multiple alternatives. For example, the Authority and Reclamation could approve a version of Alternative 2 (with a 1.3- MAF reservoir) that incorporates the bridge component of Alternative 1. In this way, the evaluation of Alternatives 1, 2, and 3 incorporates a variety of options.

Alternative 1 is the Authority's preferred Project under CEQA. This includes either Alternative 1A (operational exchanges with Reclamation but no federal investment) or Alternative 1B (Reclamation as a funding partner with operational exchanges and up to a 7% investment). At the time of publication of this RDEIR/SDEIS, Reclamation has not yet identified a preferred alternative under NEPA.

ES.7.2.1. Elements Common to All Action Alternatives

Many facility and operations elements are common to all three action alternatives. These common elements are briefly described below. More detail of these common elements is provided in Chapter 2, *Project Description and Alternatives*, and Appendix 2C, *Construction Means, Methods, and Assumptions*, of this RDEIR/SDEIS.

Facility Elements

Facility elements common to all action alternatives include:

- Improvements to and use of the existing Red Bluff Pumping Plant (RBPP), Tehama-Colusa Canal (TC Canal), Hamilton City Pump Station, and Glenn-Colusa Irrigation District (GCID) Main Canal for the diversion and conveyance of water from the Sacramento River.
- Construction of regulating reservoirs and a conveyance complex to control the conveyance of water between Sites Reservoir, TC Canal, and GCID Main Canal. These facilities would include the regulating reservoirs, pipelines, pumping generating plants (PGPs), electrical substations, and maintenance buildings.
- Construction of an administration and operations building and a maintenance and storage building near the existing Funks Reservoir.
- Construction of two main dams, the Golden Gate Dam on Funks Creek and the Sites Dam on Stone Corral Creek, to impound water in the new reservoir. A series of saddle dams and saddle dikes along the northern and eastern rims of the reservoir would also be constructed to close off topographic saddles in the surrounding ridges. The inlet/outlet works (I/O Works) for the reservoir would be located near the Golden Gate Dam.
- Upgrades to the TC Canal and construction of a new pipeline (the Dunnigan Pipeline) to convey water from the new reservoir to the CBD and ultimately, to the Sacramento River.
- Development of two primary recreation areas and a day-use boat ramp. The recreation areas would also require a network of new roads and upgrades to existing roads for maintenance and local access. The Peninsula Hills Recreation Area would be located on up to 373 acres along the northwest shore of the new reservoir and the Stone Corral Creek Recreation Area would be located on up to 235 acres along the eastern shore of the new reservoir. These areas would provide multiple recreational amenities, including campsites, boat access, horse trails, hiking trails, and vista points. Both of the primary

recreation areas would have a kiosk, access to electricity and potable water, picnic sites, hiking trails, vault toilets, and campsites. The day-use boat ramp and parking area would be located on up to 10 acres on the western side of the new reservoir.

- Construction of approximately 46 miles of new paved and unpaved roads to provide construction and maintenance access to the new facilities, as well as public access to the recreation areas.
- Acquisition and maintenance of a 100-foot buffer around the new reservoir and all related facilities, buildings, and recreation areas.

Operations and Maintenance Elements

This section describes operations and maintenance elements common to all action alternatives.

Water Operations

The Project would provide water supply and water supply-related environmental benefits to the Storage Partners. Water would be diverted from the Sacramento River at the existing RBPP through the TC Canal into the existing Funks Reservoir and at the GCID Hamilton City Pump Station through the GCID Main Canal into a new Terminal Regulating Reservoir (TRR). From the existing Funks Reservoir and a new TRR, the water would be pumped into the new Sites Reservoir. Diversions could occur between September 1 and June 15, which corresponds with the period that the Sacramento River is not fully appropriated. Diversions would occur only when the diversion criteria are met. Water would be held in storage in the reservoir until requested for release by a Storage Partner. Water releases would generally be made from May to November but could occur at any time of the year depending on the Storage Partner's need and system conveyance capacity. Water would be released from Sites Reservoir via the I/O Works near the Golden Gate Dam back into a TRR or back into Funks Reservoir. Water released could be used along the GCID Main Canal, along the TC Canal, or conveyed to the new Dunnigan Pipeline and discharged to the CBD and conveyed via the Sacramento River or the Yolo Bypass to a variety of locations in the Delta and south of the Delta. Operations would be coordinated with Reclamation and DWR to prevent conflicts with the CVP and SWP and exchanges of water may occur with the CVP and SWP. Water would also be diverted and impounded from Funks and Stone Corral Creeks and releases from Golden Gate Dam and Sites Dam, respectively, would occur into Funks and Stone Corral Creeks to maintain flows to protect downstream water right holders and ecological function.

Energy Generation and Energy Use

All action alternatives would require power to run facilities and pump water but would also generate incidental power when water is released from Sites Reservoir at the PGP. Hydropower generation would be an incidental benefit of stored water releases. The power needs for the Project beyond what could be generated by its operations would be purchased from market sources. The goal would be to purchase at least 60% from renewable, carbon-free sources from the start of operations to 2045, and to purchase 100% from renewable, carbon-free sources starting in 2045.

Facility Operations and Maintenance

Operations and maintenance activities for all facilities, including recreation areas, would include debris removal, vegetation control, rodent control, erosion control and protection, routine inspections (dams, tunnels, pipelines, PGPs, I/O Works, fencing, signs, and gates), painting, cleaning, repairs, and other routine tasks to maintain the facilities in accordance with design standards after construction and commissioning. Routine visual inspection of the facilities would be conducted to monitor performance and prevent mechanical and structural failures.

Best Management Practices, Management Plans, and Technical Studies

Best management practices (BMPs), management plans, and technical studies are part of the Project and are integrated into all action alternatives and the impact analyses in this RDEIR/SDEIS as applicable. The BMPs would be implemented as part of Project design, construction, and operation/maintenance. The BMPs include applicable design standards, criteria, and requirements, as well as standard practices required on construction projects pursuant either to regulations or as a result of best management. The Authority would develop and implement a number of operations and management plans to govern the operations and maintenance activities of the Project. These would include an Initial Sites Reservoir Fill Plan, a Reservoir Management Plan, a Land Management Plan, and a Recreation Management Plan. Finally, technical studies for aquatic biological resources are incorporated as part of the Project. These technical studies will describe factors such as juvenile salmonid migration survival in high flow conditions prior to Project operations, compliance with protective criteria for screen hydraulics at the RBPP and Hamilton City Pump Station in high flow conditions, and changes resulting from initial and continued Project operations in high flow conditions. The BMPs, plans, and technical studies are discussed in detail in Appendix 2D, *Best Management Practices, Management Plans, and Technical Studies*.

ES.7.2.2. Alternative 1 (Authority's Preferred Project)

Alternative 1 is the Authority's preferred Project under CEQA. Figures ES-5 and ES-6 depict Alternative 1's features and facilities. The unique elements of Alternative 1 include the following:

- Reservoir capacity would be 1.5 MAF;
- A bridge across the reservoir would provide access between the east and west sides of the reservoir;
- TRR East;
- The Dunnigan Pipeline would extend from the TC Canal and discharge into the CBD; and
- Reclamation could provide an investment of up to 7% of project costs, corresponding to up to 7% of Sites Reservoir storage space being dedicated to Reclamation's use.

Alternative 1 would impound surface water at the Golden Gate Dam on Funks Creek and the Sites Dam on Stone Corral Creek; a series of seven saddle dams along the surrounding eastern and northern ridges would close off topographic saddles to form Sites Reservoir. The 1.5-MAF reservoir under Alternative 1 would inundate approximately 13,200 acres of Antelope Valley in Colusa County. Under Alternative 1 water from the Sacramento River would be conveyed

through existing or upgraded conveyance facilities operated by Tehama-Colusa Canal Authority and those owned or operated by GCID to new and upgraded regulating reservoirs and into the new Sites Reservoir.

Releases from Sites Reservoir would be made to: (1) meet environmental purposes; (2) Storage Partners based on their requests to meet their water supply portfolio needs; (3) conduct operational exchanges with Reclamation in Shasta Lake and Folsom Lake; and (4) complete operational exchanges with DWR in Lake Oroville. When releases are made from Sites Reservoir, existing and new facilities would convey water from the I/O Works to the CBD for release, from which flows could enter the Yolo Bypass or Sacramento River.

Construction roads, local roads, and maintenance roads would be developed or realigned to accommodate the reservoir facilities, including the realignment of Sites Lodoga Road with a new bridge over the reservoir.

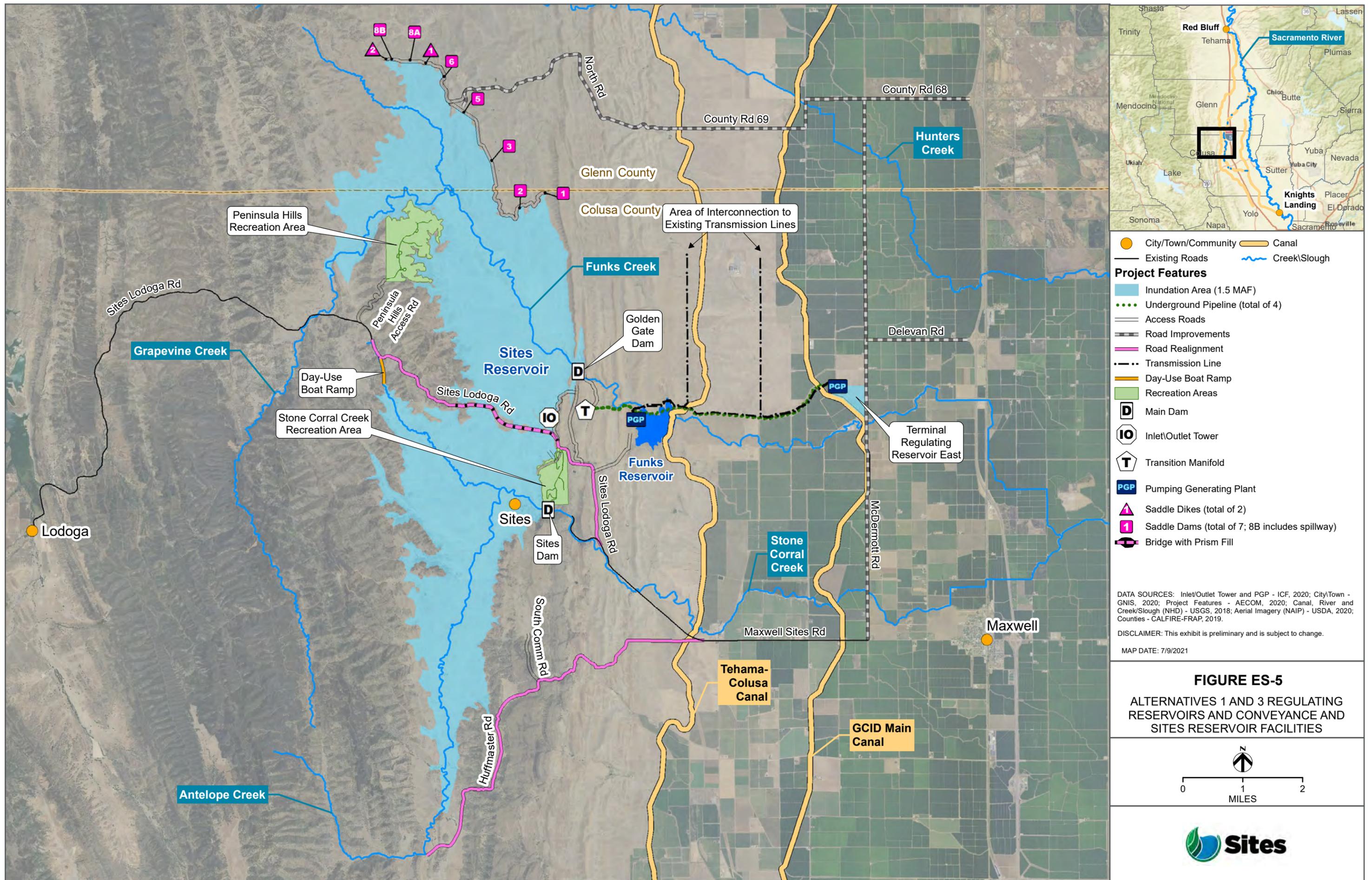
ES.7.2.3. Alternative 2

The unique features of Alternative 2 are shown in Figure ES-7 and ES-8 and include the following:

- Reservoir capacity would be 1.3 MAF;
- TRR West;
- A local access road around the southern end of the reservoir (i.e., South Road) would enable travel between the east and west sides of the reservoir;
- The Dunnigan Pipeline would extend to and discharge into the Sacramento River with primary release from the Sacramento River discharge and only a partial discharge at the CBD; and
- No Reclamation investment in the Project.

Alternative 2 would impound surface water at the Golden Gate Dam on Funks Creek and the Sites Dam on Stone Corral Creek; a series of four saddle dams (three saddle dams less than Alternative 1) along the surrounding eastern and northern ridges would close off topographic saddles to form Sites Reservoir. The 1.3-MAF reservoir (0.2 MAF less than Alternative 1) would inundate approximately 12,600 acres (600 acres less than Alternative 1) of Antelope Valley. Alternative 2 would convey water from the Sacramento River to store in the reservoir using the same existing and new diversion facilities as described for Alternative 1. Alternative 2 would involve the construction of TRR West.

As under Alternative 1, releases from Sites Reservoir under Alternative 2 would be made to meet environmental purposes, for Storage Partners based on their requests to meet their water supply portfolio needs, and for operational exchanges with Reclamation in Shasta Lake and Folsom Lake and with DWR in Lake Oroville. However, under Alternative 2, the Dunnigan Pipeline would be extended beyond the CBD so that releases could be discharged not only to the CBD, but also directly into the Sacramento River. Alternative 2 does not include any Reclamation investment in the Project.



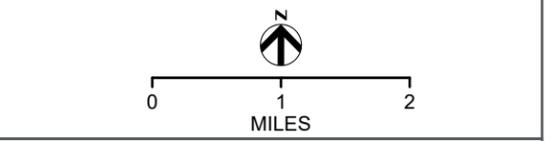
- City/Town/Community
- Canal
- Existing Roads
- Access Roads
- Road Improvements
- Road Realignment
- Transmission Line
- Day-Use Boat Ramp
- Recreation Areas
- D Main Dam
- IO Inlet/Outlet Tower
- T Transition Manifold
- PGP Pumping Generating Plant
- ▲ Saddle Dikes (total of 2)
- Saddle Dams (total of 7; 8B includes spillway)
- Bridge with Prism Fill

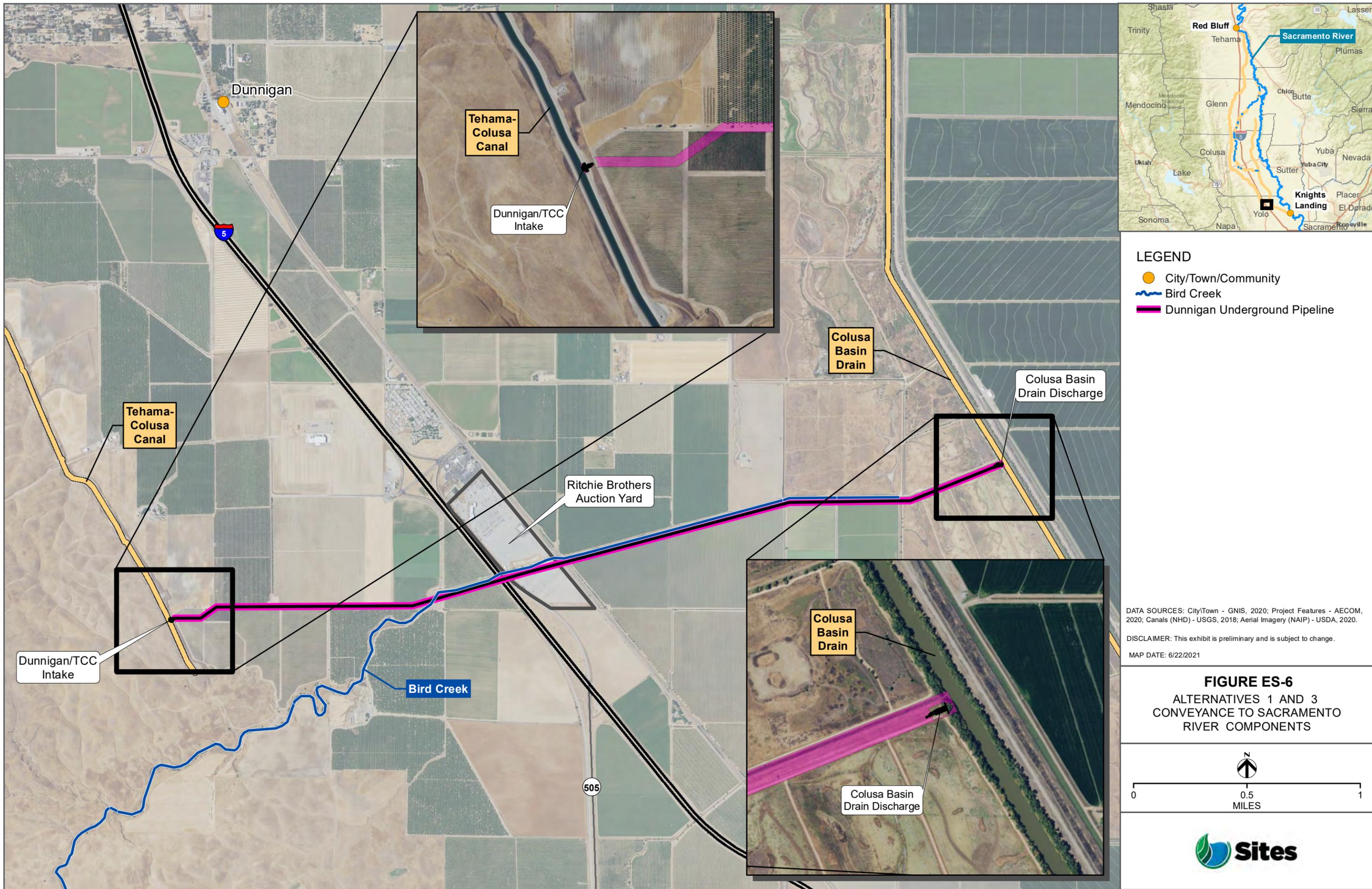
DATA SOURCES: Inlet/Outlet Tower and PGP - ICF, 2020; City/Town - GNIS, 2020; Project Features - AECOM, 2020; Canal, River and Creek/Slough (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020; Counties - CALFIRE-FRAP, 2019.

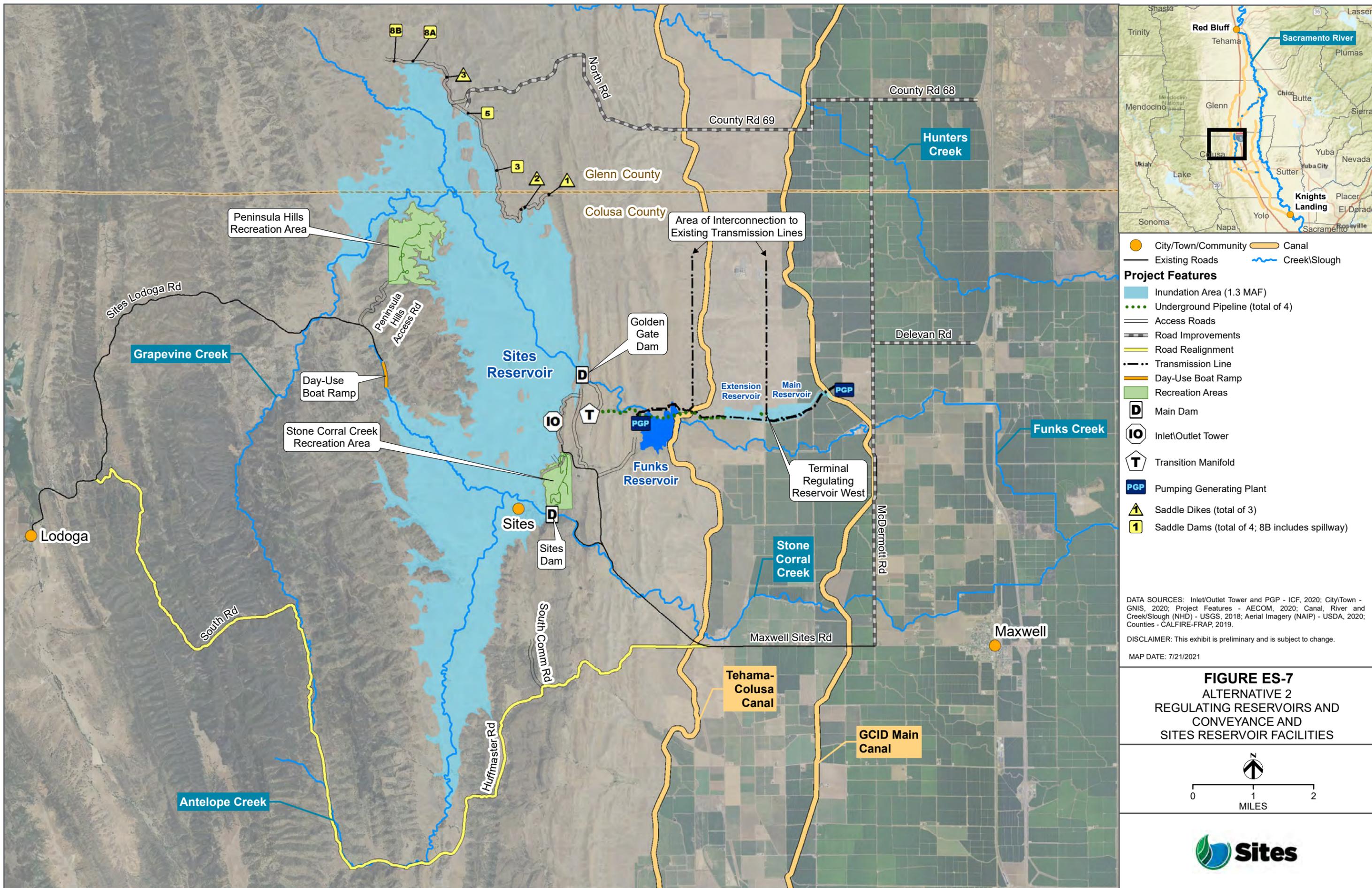
DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 7/9/2021

FIGURE ES-5
 ALTERNATIVES 1 AND 3 REGULATING RESERVOIRS AND CONVEYANCE AND SITES RESERVOIR FACILITIES







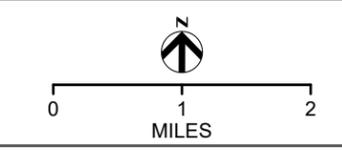
Project Features

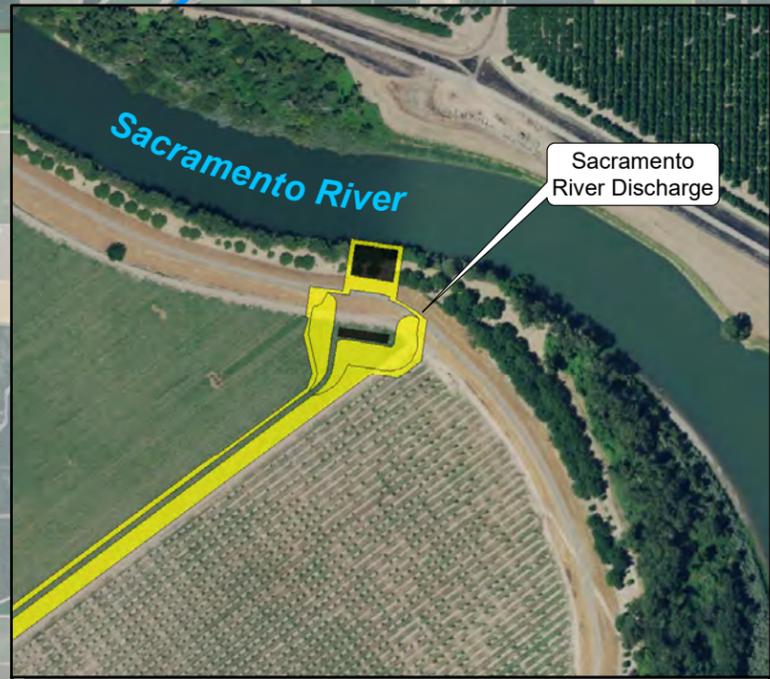
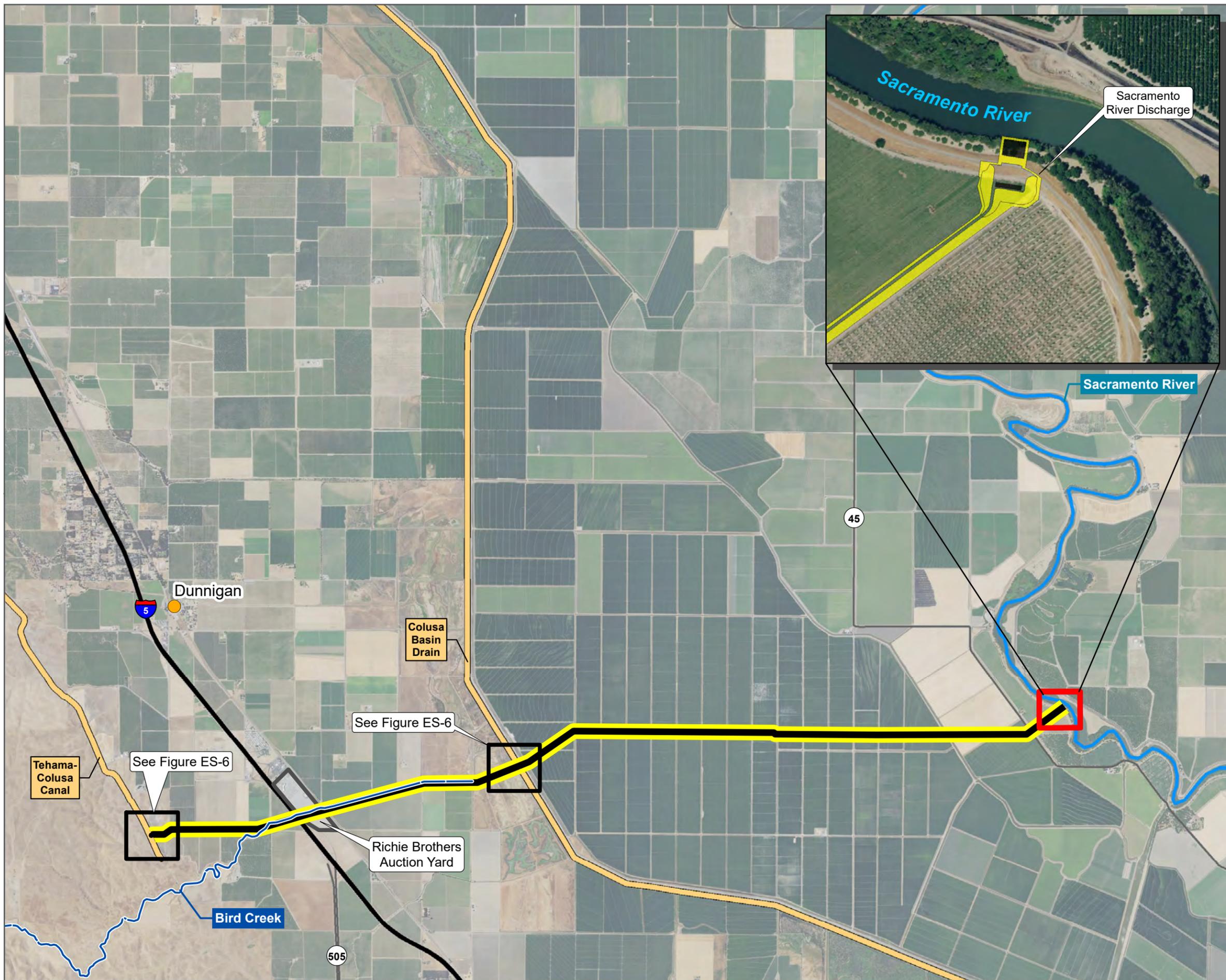
- Inundation Area (1.3 MAF)
- Underground Pipeline (total of 4)
- Access Roads
- Road Improvements
- Road Realignment
- Transmission Line
- Day-Use Boat Ramp
- Recreation Areas
- Main Dam
- Inlet/Outlet Tower
- Transition Manifold
- Pumping Generating Plant
- Saddle Dikes (total of 3)
- Saddle Dams (total of 4; 8B includes spillway)

City/Town/Community
 Existing Roads
 Canal
 Creek/Slough

DATA SOURCES: Inlet/Outlet Tower and PGP - ICF, 2020; City/Town - GNIS, 2020; Project Features - AECOM, 2020; Canal, River and Creek/Slough (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020; Counties - CALFIRE-FRAP, 2019.
 DISCLAIMER: This exhibit is preliminary and is subject to change.
 MAP DATE: 7/21/2021

FIGURE ES-7
 ALTERNATIVE 2
 REGULATING RESERVOIRS AND
 CONVEYANCE AND
 SITES RESERVOIR FACILITIES





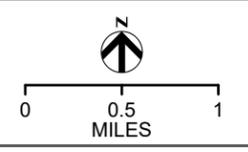
- LEGEND**
- City/Town/Community
 - ~ Bird Creek
 - Dunnigan Pipeline

DATA SOURCES: City/Town - GNIS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.

DISCLAIMER: This exhibit is preliminary and is subject to change.

MAP DATE: 7/21/2021

FIGURE ES-8
 ALTERNATIVE 2 CONVEYANCE TO
 SACRAMENTO RIVER COMPONENTS



Construction, local, and maintenance roads would be required and developed; however, Alternative 2 does not propose a bridge for the relocated Sites Lodoga Road. Under Alternative 2, the existing Huffmaster Road would be realigned around the southern end of the reservoir and a new South Road would connect to the realigned Huffmaster Road. The recreation areas that would be provided under Alternative 2 would be identical to those for Alternative 1. Overall, operations for Alternative 2 would be similar to those for Alternative 1 but would occur within the constraints of a smaller reservoir.

ES.7.2.4. Alternative 3

Alternative 3 facilities and components would be the same as described for Alternative 1 and are shown in Figure ES-5. Operationally, Alternative 3 would include increased Reclamation participation and investment as compared to Alternative 1, with investment of up to 25% of the Project cost. The increased level of Reclamation investment would result in up to 25% of Sites Reservoir storage space being dedicated to Reclamation's use. Reclamation's share of Sites water would be flexibly used by Reclamation to meet CVP objectives that provide for water supply and environmental needs. The increased level of Reclamation investment would also result in increased opportunities for maintaining cold water pool in Shasta Lake, Folsom Lake, and Lake Oroville. Increased Reclamation investment would require some reduction in local participation for Alternative 3 as compared with Alternative 1; it is assumed that Storage Partners that are local agencies would reduce their participation to accommodate the investment by Reclamation. All other components of Alternative 3 are the same as those for Alternative 1.

ES.8 Project Impacts and Mitigation Measures

Table ES-2 provides a summary of impacts and mitigation measures for the Project, which are fully analyzed and discussed in Chapters 5 through 30 of this RDEIR/SDEIS. Within each of these chapters, as shown in Table ES-2, the impacts are listed numerically and sequentially. An impact statement precedes the discussion of each impact and provides a summary of the impact topic.

Mitigation measures are proposed, where feasible, to avoid, minimize, rectify, reduce, or compensate for significant and potentially significant impacts of the alternatives, in accordance with Section 15126.4 of the CEQA Guidelines and NEPA (40 CFR 1502.14, 1502.16, 1508.8) and accompany each impact discussion. Under NEPA, an EIS must identify relevant, reasonable mitigation measures that are not already included in the proposed action or alternatives to the proposed action that could avoid, minimize, rectify, reduce, eliminate, or compensate for the project's adverse environmental effects (40 CFR 1508.20). Mitigation measures are presented for each resource to avoid, minimize, rectify, reduce, eliminate, or compensate for adverse environmental effects of Alternatives 1 through 3 as compared to the No Project Alternative. Similar to the impact descriptions, mitigation measures are listed numerically and sequentially throughout each chapter. The numbering system provides a mechanism for tracking unique impacts and mitigation measures by resource area, using an acronym for each resource (e.g., Groundwater is shortened to GW; Vegetation and Wetlands to VEG). The impacts are identified, for example, as "Impact VEG-1" and the mitigation measures as "Mitigation Measure VEG-1.1" and "Mitigation Measure VEG-1.2."

Each impact is accompanied by a CEQA finding and a NEPA conclusion (except for the impacts in Chapters 28 through 30—climate change, Indian Trust Assets, and environmental justice and socioeconomics—which are unique to NEPA and are accompanied only by a NEPA conclusion). Under CEQA, the impacts of the alternatives are compared to the existing conditions baseline and the No Project Alternative and are classified as follows:

- **No impact (NI)**—No change in the environment would result from implementing the alternative.
- **Less-than-significant impact (LTS)**—No substantial adverse change in the environment would result from implementing the alternative.
- **Less than significant with mitigation (LTSM)**—The implementation of one or more mitigation measures would reduce the impact from an alternative to a less-than-significant level.
- **Significant impact (S)**—A substantial adverse change in the physical conditions of the environment would result from implementing the alternative based on the evaluation of Project effects using specified significance criteria. Mitigation measures are proposed, when feasible, to reduce effects on the environment.

Under NEPA, the environmental consequences of the action alternatives are compared to the No Action Alternative, which is equivalent to the CEQA existing conditions baseline for this RDEIR/SDEIS, and are classified as follows:

- **Beneficial (B)**—An effect is considered beneficial if it would provide benefit to the environment as defined for that resource.
- **No Effect (NE)**—A finding of no effect is identified if the analysis concludes that the alternative would have no effect or would not affect the particular resource in any adverse way.
- **No Adverse Effect (NE)**—A finding of no adverse effect is identified if the analysis concludes that it would cause no substantial adverse change to the environment and requires no mitigation.
- **Adverse Effect (AE) or Substantial Adverse Effect (SA)**—A finding of adverse effect or substantial adverse effect is identified if the analysis concludes that it would cause an adverse or substantial adverse change to the environment even with the inclusion of one or more feasible mitigation measures or could not be mitigated.

ES.9 Areas of Known Controversy

Several areas of controversy were identified through stakeholder meetings and during the preparation of the 2017 Draft EIR/EIS. These areas included impacts on property owners in the Project area whose property may be required for construction and impacts on tribal cultural resources because construction may affect burials and other sensitive tribal resources. Concerns were also raised about potential impacts on golden eagles (*Aquila chrysaetos*) that have been identified in and around the inundation area and the potential for impacts on aquatic biological

resources due to changes in flow patterns of the Sacramento River. Concerns were also raised regarding the water quality of the water diverted from the Sacramento River and released from the Sites Reservoir. Concerns have also been raised about the potential for the Project to result in changes to Reclamation's operations of the Trinity River Division of the CVP. Many of the areas of known controversy remain the same and are addressed in specific chapters of this RDEIR/SDEIS.

Multiple chapters in this RDEIR/SDEIS describe and evaluate resources related to areas of known controversy described above. For previous areas of known controversy that were related to construction and operation of a Delevan Facility and the Delevan Pipeline are no longer applicable because these facilities have been eliminated from Alternatives 1, 2, and 3. Chapter 2 discusses the relocation of residents of the community of Sites and the Reservoir Management Plan that would be used to manage land resources and property once the reservoir was operational. Chapter 2, *Project Description and Alternatives*, describes that the Project would not affect or result in changes in the operation of the CVP, Trinity River Division facilities (including Clear Creek); Reclamation would continue to operate the Trinity River Division consistent with all applicable statutory, legal, and contractual obligations. Chapter 6, *Surface Water Quality*, addresses potential water quality impacts. Chapter 10, *Wildlife Resources*, addresses potential impacts on golden eagles. Chapter 11, *Aquatic Biological Resources*, addresses potential impacts on aquatic biological resources. Chapter 22, *Cultural Resources*, discusses potential impacts on cemeteries and archaeological resources that may pertain to tribes. Chapter 23, *Tribal Cultural Resources*, documents tribal cultural resources that have been identified by Tribes through the California Assembly Bill 52 consultation process in which the Authority has been engaged.

ES.10 Commenting on this RDEIR/SDEIS

Through the publication of this RDEIR/SDEIS, the 2017 Draft EIR/EIS is being revised to reflect changes to the Project and the environmental document (RDEIR/SDEIS) is being recirculated for public review and comment in accordance with Section 15088.5 of the CEQA Guidelines. Accordingly, reviewers must limit their comments only to this RDEIR/SDEIS and should not present comments on the prior 2017 Draft EIR/EIS. Although the 2017 Draft EIR/EIS is part of the administrative record in this matter, prior comments submitted on the 2017 Draft EIR/EIS do not require a response under CEQA; new comments must be submitted only on this RDEIR/SDEIS; the Authority will only respond to those comments submitted in response to this RDEIR/SDEIS. Reclamation is circulating the SDEIS for public review and comment in accordance with Title 40 of the CFR, Section 1502.9². Reclamation will respond to comments submitted on the 2017 Draft EIR/EIS and this RDEIR/SDEIS in the Final EIR/EIS under NEPA.

² The notice of intent (NOI) for which this Supplemental Draft Environmental Impact Statement is issued was published before September 14, 2020. Therefore, all references to CEQ regulations are to those regulations at 40 CFR parts 1500–1508 in existence as of the date the NOI was published in the Federal Register on May 14, 2020.

Table ES-2. Summary of Impacts and Mitigation Measures

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
Surface Water Resources				
Impact HYDRO-1: Reduce water supply for other water users				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact HYDRO-2: Substantial increase in the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/B	-	-
Impact HYDRO-3: Impede or redirect flood flows				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Surface Water Quality				
Impact WQ-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during construction				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure WQ-1.1: Methylmercury Management	SU/SA
Impact WQ-2: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during operation				
<i>Operation</i>	No Project	NI/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
	1, 2, 3	S/SA	Mitigation Measure WQ-1.1: Methylmercury Management Mitigation Measure WQ-2.1: Prevent Metals Impacts in Stone Corral Creek Associated with Sites Reservoir Discharge Mitigation Measure WQ-2.2: Prevent Net Detrimental Metal and Pesticide Effects Associated with Moving Colusa Basin Drain Water Through the Yolo Bypass	SU/SA
Impact WQ-3: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality during maintenance activities				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact WQ-4: Be placed in a flood hazard or seiche zone, risking release of pollutants due to Project inundation				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact WQ-5: Conflict with or obstruct implementation of a water quality control plan				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact WQ-6: Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Fluvial Geomorphology				
Impact FLV-1: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in a substantial increase or decrease in on- or off-site erosion or siltation				
	No Project	NI/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
<i>Construction and Operation</i>	1, 2, 3	LTS/NE	-	-
Impact FLV-2: Substantially alter natural river geomorphic processes (i.e., flow regime, sediment transport, and bank erosion) and existing river geomorphic characteristics (i.e., sinuosity, channel gradient, substrate composition, channel width and depth, and riparian vegetation)				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact FLV-3: Substantially alter the amount of instream woody material, boulders, shaded riverine aquatic habitat, or spawning gravel in Funks and Stone Corral Creeks downstream of Sites Reservoir				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact FLV-4: Substantially alter geomorphic processes upstream of the dam sites				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Groundwater Resources				
Impact GW-1: Violation of water quality standards or waste discharge requirements or otherwise substantial degradation of groundwater quality				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/B	-	-
Impact GW-2: Substantial decrease in groundwater supplies or substantial interference with groundwater recharge that would impede sustainable groundwater management of the basin				
<i>Construction</i>	No Project	NI/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
	1, 2, 3	LTS/NE	-	-
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/B	-	-
Impact GW-3: Conflict with or obstruct implementation of a sustainable groundwater management plan				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Vegetation and Wetland Resources				
Impact VEG-1: Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on plant species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure VEG-1.1: Conduct Appropriately Timed Surveys for Special-Status Plant Species Prior to Construction Activities Mitigation Measure VEG-1.2: Establish Activity Exclusion Zones Around Special-Status Plants in Temporary Impact Areas and Compensate for Permanent Impacts on Special-Status Plant Species	LTSM/NE
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure VEG-1.3: Establish Activity Exclusion Zones Around Special-Status Plants Prior to Vegetation Maintenance Activities	LTSM/NE
Impact VEG-2: Substantial adverse effect (i.e., loss or removal) on any riparian habitat or other sensitive natural community				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure VEG-2.1: Conduct Surveys for Sensitive Natural Communities and Oak Woodlands in the Project Area Prior to Construction Activities Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities	SU/SA
<i>Operation</i>	No Project	NI/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
	1, 2, 3	S/SA	Mitigation Measure VEG-2.3: Establish Activity Exclusion Zones Around Sensitive Natural Communities Prior to Vegetation Maintenance Activities	LTSM/NE
Impact VEG-3: Substantial adverse effect (i.e., loss or removal) on state or federally protected wetlands				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure VEG-3.1: Avoid and Minimize Disturbance of Wetlands and Non-Wetland Waters During Construction Activities Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters	LTSM/NE
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure VEG-3.4: Establish Activity Exclusion Zones Around Wetlands and Non-Wetland Waters Prior to Vegetation Maintenance Activities	LTSM/NE
Impact VEG-4: Conflict with any local policies or ordinances protecting vegetation resources (including wetlands and non-wetland waters), such as a tree preservation policy or ordinance				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure VEG-1.2: Establish Activity Exclusion Zones Around Special-Status Plants in Temporary Impact Areas and Compensate for Permanent Impacts on Special-Status Plant Species Mitigation Measure VEG-2.1: Conduct Surveys for Sensitive Natural Communities and Oak Woodlands in the Project Area Prior to Construction Activities Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities Mitigation Measure VEG-3.1: Avoid and Minimize Disturbance of Wetlands and Non-Wetland Waters During Construction Activities Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands	SU/SA

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
			<p>Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters</p> <p>Mitigation Measure VEG-4-1: Avoid and Minimize Potential Adverse Effects on Oak Woodlands During Construction</p> <p>Mitigation Measure VEG-4.2: Compensate for Adverse Effects on Oak Woodlands</p>	
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure VEG-4.3: Establish Activity Exclusion Zones Around Blue Oak Woodlands in Vegetation Maintenance Areas	LTSM/NE
Impact VEG-5: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	<p>Mitigation Measure VEG-2.1: Conduct Surveys for Sensitive Natural Communities and Oak Woodlands in the Project Area Prior to Construction Activities</p> <p>Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities</p> <p>Mitigation Measure VEG-3.1: Avoid and Minimize Disturbance of Wetlands and Non-Wetland Waters During Construction Activities</p> <p>Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands</p> <p>Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters</p> <p>Mitigation Measure VEG-4.1: Avoid and Minimize Potential Adverse Effects on Oak Woodlands</p> <p>Mitigation Measure VEG-4.2: Compensate for Adverse Effects on Oak Woodlands</p>	LTSM/NE
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	NI/NE	-	-
Impact VEG-6: Introduction or increased spread of invasive plant species				
	No Project	NI/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
<i>Construction and Operation</i>	1, 2, 3	LTS/NE	-	-
Wildlife Resources				
Impact WILD-1: Substantial adverse effect (i.e., loss or removal), either directly or through habitat modifications, on wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 3	S/SA	<p>Mitigation Measure WILD-1.1: Assess Habitat Suitability and Survey Suitable Habitat for Vernal Pool Branchiopods</p> <p>Mitigation Measure WILD-1.2: Avoid and Minimize Potential Effects on Vernal Pool Branchiopods and Western Spadefoot</p> <p>Mitigation Measure WILD-1.3: Compensate for Impacts on Occupied Vernal Pool Branchiopod Habitat</p> <p>Mitigation Measure WILD-1.6: Conduct Surveys for Suitable Valley Elderberry Longhorn Beetle Habitat</p> <p>Mitigation Measure WILD-1.7: Fence Elderberry Shrubs to be Protected</p> <p>Mitigation Measure WILD-1.8: Transplant Permanently Affected Elderberry Shrubs and Compensate for Loss of Valley Elderberry Longhorn Beetle and its Habitat</p> <p>Mitigation Measure WILD-1.10: Assess Habitat Suitability and Survey for Presence of Monarch Butterfly Nectar and Larval Host Plants</p> <p>Mitigation Measure WILD-1.11: Compensate for Loss of Monarch Butterfly Nectar and Larval Host Plants</p> <p>Mitigation Measure WILD-1.12: Assess Habitat Suitability and Survey for Presence of Crotch Bumble Bee and Western Bumble Bee Food Plants</p> <p>Mitigation Measure WILD-1.13: Compensate for Loss of Crotch Bumble Bee and Western Bumble Bee Habitat</p>	<p>SU/SA (golden eagle) LTSM/NE (other species)</p>

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
			<p>Mitigation Measure WILD-1.14: Assess Habitat Suitability and Survey Suitable Habitat for Western Spadefoot, California Red-legged Frog, and Western Pond Turtle</p> <p>Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities</p> <p>Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands</p> <p>Mitigation Measure WILD-1.17: Implement California Red-legged Frog Protective Measures</p> <p>Mitigation Measure WILD-1.18: Compensate for Permanent and Temporary Losses of Occupied California Red-legged Frog Aquatic and Upland Habitats</p> <p>Mitigation Measure WILD-1.19: Conduct Preconstruction Surveys for Western Pond Turtle and Monitor Initial In-Water Work</p> <p>Mitigation Measure VEG-3.1: Avoid and Minimize Disturbance of Wetlands and Non-Wetland Waters During Construction Activities</p> <p>Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters</p> <p>Mitigation Measure WILD-1.20: Implement Protective Measures for Giant Gartersnake</p> <p>Mitigation Measure WILD-1.21: Compensate for Permanent and Temporary Losses of Giant Gartersnake Aquatic and Upland Habitats</p> <p>Mitigation Measure WILD-1.22: Conduct Vegetation Removal During the Non-Breeding Season of Nesting Migratory Birds</p> <p>Mitigation Measure WILD-1.23: Conduct Preconstruction Surveys for Non-Raptor Nesting Migratory Birds and Implement Protective Measures if Found</p> <p>Mitigation Measure WILD-1.24: Conduct Surveys for Western Burrowing Owl Prior to Construction and Implement Avoidance and Minimization Measures if Found</p> <p>Mitigation Measure WILD-1.25: Restore Temporarily Disturbed Habitat and Compensate for the Permanent Loss of Occupied Burrowing Owl Habitat</p>	

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
			<p>Mitigation Measure WILD-1.28: Conduct Focused Surveys for Golden Eagle and Bald Eagle and Implement Protective Measures if Found</p> <p>Mitigation Measure WILD-1.29: Compensate for the Loss of Eagle Nest Trees</p> <p>Mitigation Measure VEG-4.1: Avoid and Minimize Potential Adverse Effects on Oak Woodlands During Construction</p> <p>Mitigation Measure VEG-4.2: Compensate for Adverse Effects on Oak Woodlands</p> <p>Mitigation Measure WILD-1.30: Conduct Focused Surveys for Nesting Swainson’s Hawk, White-tailed Kite, and Other Raptors Prior to Construction and Implement Protective Measures During Construction</p> <p>Mitigation Measure WILD-1.31: Compensate for the Permanent Loss of Foraging Habitat for Swainson’s Hawk and White-tailed Kite</p> <p>Mitigation Measure AG-1.1: Purchase Agricultural Conservation Easements to Preserve Regional Important Farmland</p> <p>Mitigation Measure WILD-1.32: Conduct Surveys and Implement Protection Measures for Special-Status Bat Species Prior to Building/Structure Demolition</p> <p>Mitigation Measure WILD-1.33: Conduct Surveys and Implement Protection Measures for Special-Status Bat Species Prior to Tree Trimming and Removal</p> <p>Mitigation Measure WILD-1.34: Compensate for Permanent Impacts on Occupied Roosting Habitat</p> <p>Mitigation Measure WILD-1.35: Implement Protective Measures to Avoid and Minimize Potential Impacts on American Badger</p>	
	2	S/SA	<p>Same as for Alternative 1, plus:</p> <p>Mitigation Measure WILD-1.4: Evaluate and Survey Potential Habitat for Antioch Dunes Anthicid and Sacramento Anthicid Beetles and Implement Protective Measures</p> <p>Mitigation Measure WILD-1.5: Compensate for the Loss of Occupied Antioch Dunes Anthicid and Sacramento Anthicid Beetle Habitat</p>	SU/SA (golden eagle), LTSM/NE (other species)

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	<p>Mitigation Measure WILD-1.9: Protect Special-Status Invertebrates and Their Host and Food Plants from Herbicide and Pesticide Use</p> <p>Mitigation Measure WILD-1.15: Design and Construct Wildlife Crossings for New Roadways at Suitable Locations</p> <p>Mitigation Measure WILD-1.16: Monitor and Maintain Wildlife Crossings</p> <p>Mitigation Measure WILD-1.26: Protect Special-Status Wildlife from Rodenticide Use</p> <p>Mitigation Measure WILD-1.27: Construct Overhead Power Lines and Associated Equipment Following Suggested Practices to Reduce Bird Collisions with Power Lines</p>	LTSM/NE
Impact WILD-2: Substantial interference with the movement of a native resident or migratory or wildlife species or with established native resident or migratory wildlife corridors, or impediment of the use of native wildlife nursery sites				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 3	S/SA	Same as for Impact WILD-1	SU/SA
	2	S/SA	Same as for Impact WILD-1	SU/SA
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Same as for Impact WILD-1	SU/SA
Impact WILD-3: Conflict with any local policies or ordinances protecting wildlife resources				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 3	S/SA	Same as for Impact WILD-1 and WILD-2	LTSM/NE
	2	S/SA	Same as for Impact WILD-1 and WILD-2	LTSM/NE
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Same as for Impacts WILD-1 and WILD-2	LTSM/NE
Impact WILD-4: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan				
<i>Construction</i>	No Project	NI/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
	1, 3	S/SA	Same as for Impact WILD-1	LTSM/NE
	2	S/SA	Same as for Impact WILD-1	LTSM/NE
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Same as for Impact WILD-1	LTSM/NE
Aquatic Biological Resources				
Impact FISH-1: Construction effects on fish and aquatic biological resources				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure VEG-2.1: Conduct Surveys Mitigation Measure VEG-2.2: Avoid and Compensate for Adverse Effects on Sensitive Natural Communities Mitigation Measure VEG-3.2: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Wetlands Mitigation Measure VEG-3.3: Compensate for Temporary and Permanent Impacts on State- or Federally Protected Non-Wetland Waters	LTSM/NE
Impact FISH-2: Operations effects on winter-run Chinook salmon				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure FISH-2.1: Wilkins Slough Flow Protection Criteria	LTSM/NE
Impact FISH-3: Operations effects on spring-run Chinook salmon				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Same as for Impact FISH-2	LTSM/NE
Impact FISH-4: Operations effects on fall-run/late fall-run Chinook salmon				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Same as for Impact FISH-2	LTSM/NE
Impact FISH-5: Operations effects on Central Valley steelhead				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Same as for Impact FISH-2	LTSM/NE

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
Impact FISH-6: Operations effects on green sturgeon				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact FISH-7: Operations effects on white sturgeon				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact FISH-8: Operations effects on delta smelt				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure FISH-8.1: Prevent Detrimental Dissolved Oxygen and Water Temperature Effects to Fish Associated with Moving Colusa Basin Drain Water Through the Yolo Bypass Mitigation Measure WQ-2.2: Prevent Net Detrimental Metal and Pesticide Effects Associated with Moving Colusa Basin Drain Water Through the Yolo Bypass	LTSM/NE
Impact FISH-9: Operations effects on longfin smelt				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure FISH-9.1: Tidal Habitat Restoration for Longfin Smelt	LTSM/NE
Impact FISH-10: Operations effects on lampreys				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact FISH-11: Operations effects on native minnows (Sacramento splittail, Sacramento hitch, hardhead, and Central California roach)				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact FISH-12: Operations effects on starry flounder and northern anchovy				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
Impact FISH-13: Operations effects on striped bass				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact FISH-14: Operations effects on American shad				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact FISH-15: Operations effects on threadfin shad				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact FISH-16: Operations effects on black bass (largemouth bass, smallmouth bass, and spotted bass)				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact FISH-17: Operations effects on California bay shrimp				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact FISH-18: Operations effects on reservoir species				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/B	-	-
Impact FISH-19: Operations effects on Southern Resident killer whale				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact FISH-20: Maintenance effects on fish and aquatic biological resources				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
Geology and Soils				
Impact GEO-1a: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact GEO-1b: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact GEO-1c: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact GEO-1d: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact GEO-2: Result in reservoir-triggered seismicity or be subject to a seiche				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact GEO-3: Result in substantial soil erosion or the loss of topsoil				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact GEO-4: Be located in a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse				
	No Project	NI/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
<i>Construction and Operation</i>	1, 2, 3	LTS/NE	-	-
Impact GEO-5: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	NI/NE	-	-
Impact GEO-6: Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact GEO-7: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 3	S/SA	<p>Mitigation Measure GEO-7.1: Retain a Qualified Paleontological Resource Specialist Prior to the Start of Construction</p> <p>Mitigation Measure GEO-7.2: Consultation with the Paleontological Resource Specialist Prior to and During Project Construction</p> <p>Mitigation Measure GEO-7.3: Prepare and Implement a Paleontological Resources Monitoring and Mitigation Plan</p> <p>Mitigation Measure GEO-7.4: Conduct Monitoring During Project Construction and Prepare Monthly Reports</p> <p>Mitigation Measure GEO-7.5: Ensure Implementation of the Paleontological Resources Monitoring and Mitigation Plan</p>	SU/SA
	2	S/SA	Same as for Alternative 1	LTSM/NE
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
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				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	NI/NE	-	-
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				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	NI/NE	-	-
Land Use				
Impact LAND-1: Physical division of an established community				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 3	LTS/NE	-	-
	2	S/SA	No feasible mitigation measures identified	SU/SA
Impact LAND-2: Significant environmental impact due to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Agriculture and Forestry Resources				
Impact AG-1: Conversion of 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 nonagricultural use.				
<i>Construction</i>	No Project	NI	-	-
	1, 2, 3	LTS	-	-
<i>Operation</i>	No Project	NI	-	-
	1, 2, 3	S	Mitigation Measure AG-1.1: Purchase Agricultural Conservation Easements to Preserve Regional Important Farmland	SU

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
Impact AG-2: Conflict with existing zoning for agricultural use or a Williamson Act contract				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure AG-1.1: Purchase Agricultural Conservation Easements to Preserve Regional Important Farmland Mitigation Measure AG-2.1: Minimize Impacts on Williamson Act-Contracted Lands, Comply with Government Code Sections 51290–51293, and Coordinate with Landowners and Agricultural Operators	SU/SA
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure AG-1.1: Purchase Agricultural Conservation Easements to Preserve Regional Important Farmland Mitigation Measure AG-2.1: Minimize Impacts on Williamson Act-Contracted Lands, Comply with Government Code Sections 51290–51293, and Coordinate with Landowners and Agricultural Operators	SU/SA
Impact AG-3: Conversion of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, as designated under the federal Farmland Protection Policy Act, to nonagricultural use				
<i>Construction</i>	No Project	NE	-	-
	1, 2, 3	NE	-	-
<i>Operation</i>	No Project	NE	-	-
	1, 2, 3	SA	Mitigation Measure AG-1.1: Purchase Agricultural Conservation Easements to Preserve Regional Important Farmland	SA
Impact AG-4: Involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland, as designated under the FMMP of the California Resources Agency or under the federal Farmland Protection Policy Act, to nonagricultural use				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	NI/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
Recreation Resources				
Impact REC-1: Increased use of existing neighborhood and regional parks or other recreational facilities that would result in new or accelerated substantial physical deterioration of those facilities				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE/B	-	-
Energy				
Impact EN-1: Potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact EN-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	NI/NE	-	-
Impact EN-3: Place a substantial demand on regional energy supply or require substantial additional capacity or substantially increase peak and base period electricity demand				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Navigation, Transportation, and Traffic				
Impact TRA-1: Conflict with a program, plan, ordinance or policy addressing the circulation system including transit, roadway, bicycle and pedestrian facilities				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact TRA-2: Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)				

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	NI/NE	-	-
Impact TRA-3: Substantial increase in hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact TRA-4: Result in inadequate emergency access				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact TRA-5: Substantially affect school bus travel				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
<i>Operation</i>	No Project	NI/NE	-	-
	1, 3	LTS/NE	-	-
	2	S/SA	No feasible mitigation measures identified	SU/SA
Impact NAV-1: Substantially impair recreational and commercial navigation during construction and operations				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 3	NI/NE	-	-
	2	LTS/NE	-	-
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	NI/NE	-	-
Noise				
Impact NOI-1: Generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies				
<i>Construction</i>	No Project	NI/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
	1, 2, 3	LTS/NE	-	-
Impact NOI-2: Generation of a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies				
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact NOI-3: Generation of excessive groundborne vibration or groundborne noise levels				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Air Quality				
Impact AQ-1: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard during construction, or conflict with or obstruct implementation of the applicable air quality plan				
<i>Construction</i>	No Project	NI	-	-
	1, 2, 3	S	Mitigation Measure AQ-1.1: Zero Emission and/or Near Zero Emission Vehicles and Off-Road equipment Mitigation Measure AQ-1.2: Offset Construction and Operation-Generated Criteria Pollutants in CCAPCD, GCAPCD, and YSAQMD	SU
Impact AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard during operation, or conflict with or obstruct implementation of the applicable air quality plan				
<i>Operation</i>	No Project	NI	-	-
	1, 2, 3	S	Mitigation Measure AQ-2.1: Recreational Boat Emissions Minimization Plan Mitigation Measure AQ-2.2: Offset Operation-Generated Criteria Pollutants in CCAPCD and GCAPCD	SU
Impact AQ-3: Result in impacts on Federal Air Quality Conformity				
<i>Construction and Operation</i>	No Project	NE	-	-
	1, 2, 3	NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
Impact AQ-4a: Expose sensitive receptors to substantial pollutant concentrations—toxic air contaminants				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact AQ-4b: Expose sensitive receptors to substantial pollutant concentrations—localized criteria pollutant emissions				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	No feasible mitigation measures identified	SU/SA
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact AQ-4c: Expose sensitive receptors to substantial pollutant concentrations—asbestos, lead-based paint, or valley fever				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact AQ-5: Result in odors adversely affecting a substantial number of people				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Greenhouse Gas Emissions				
Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure GHG-1.1: Achieve Net-Zero Emissions Through a GHG Reduction Plan	LTSM/NE
Cultural Resources				
Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to California Code of Regulations Section 15064.5				
<i>Construction</i>	No Project	NI/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
	1, 2, 3	S/SA	Mitigation Measure CUL-1.1: Identify Significant Built Resources Mitigation Measure CUL-1.2: Avoid Significant Built Resources Mitigation Measure CUL-1.3: Protect Significant Built Resources Mitigation Measure CUL-1.4: Significant Historic Built Resources Treatment	SU/SA
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	NI/NE	-	-
Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to California Code of Regulations Section 15064.5				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure CUL-2.1: Identify Significant Archaeological Resources Mitigation Measure CUL-2.2: Avoid Significant Archaeological Resources Mitigation Measure CUL-2.3: Protect Significant Archaeological Resources Mitigation Measure CUL-2.4: Significant Archaeological Resources Treatment	SU/SA
Impact CUL-3: Disturb any human remains, including those interred outside of formal cemeteries				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	Mitigation Measure CUL-3.1: Cemetery Relocation Plan Mitigation Measure CUL-3.2: Avoid, Protect, and Treat Human Burials	SU/SA
Tribal Cultural Resources				
Impact TCR-1: Substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or other local register or that the lead agency has determined to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1.				
<i>Construction</i>	No Project	NI	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
	1, 2, 3	S	<p>Mitigation Measure TCR-1.1: Implement Mitigation Measures Recommended in Public Resources Code Section 21084.3 to Avoid Damaging Effects on Tribal Cultural Resources</p> <p>Mitigation Measure TCR-1.2: Tribal Monitoring</p> <p>Mitigation Measure TCR-1.3: Implement Agreed-Upon Protocol for the Treatment of Human Remains and Cultural Items</p> <p>Mitigation Measure CUL-2.1: Identify Significant Archaeological Resources</p> <p>Mitigation Measure CUL-2.2: Avoid Significant Archaeological Resources</p> <p>Mitigation Measure CUL-2.3: Protect Significant Archaeological Resources</p> <p>Mitigation Measure CUL-2.4: Significant Archaeological Resources Treatment</p> <p>Mitigation Measure CUL-3.1: Cemetery Relocation Procedure</p> <p>Mitigation Measure CUL-3.2: Avoid, Protect, and Treat Human Burials</p>	SU
	No Project	NI		-
<i>Operation</i>	1, 2, 3	S	<p>Mitigation Measure TCR-1.1: Implement Mitigation Measures Recommended in Public Resources Code Section 21084.3 to Avoid Damaging Effects on Tribal Cultural Resources</p> <p>Mitigation Measure TCR-1.2: Tribal Monitoring</p> <p>Mitigation Measure TCR-1.3: Implement Agreed-Upon Protocol for the Treatment of Human Remains and Cultural Items</p> <p>Mitigation Measure FISH-2.1: Wilkins Slough Flow Protection Criteria</p> <p>Mitigation Measure CUL-2.1: Identify Significant Archaeological Resources</p> <p>Mitigation Measure CUL-2.2: Avoid Significant Archaeological Resources</p> <p>Mitigation Measure CUL-2.3: Protect Significant Archaeological Resources</p> <p>Mitigation Measure CUL-2.4: Significant Archaeological Resources Treatment</p> <p>Mitigation Measure CUL-3.1: Cemetery Relocation Procedure</p> <p>Mitigation Measure CUL-3.2: Avoid, Protect, and Treat Human Burials</p>	SU

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
Visual Resources				
Impact VIS-1: Substantially degrade the existing visual character or quality of public views of the site and its surroundings				
<i>Construction</i>	No Project	NI/NE	-	-
	1, 2, 3	S/SA	No feasible mitigation measures identified	SU/SA
<i>Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact VIS-2: Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Population and Housing				
Impact POP-1: Induce substantial unplanned population growth in an area, either directly or indirectly				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Public Services and Utilities				
Impact UTIL-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 fire protection, police protection, schools, or other public facilities				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact UTIL-2: Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects				

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact UTIL-3: Have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact UTIL-4: Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact UTIL-5: Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Public Health and Environmental Hazards				
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact HAZ-2: Create a significant hazard through accidental releases of hazardous materials into the environment				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact HAZ-3: Be located on an identified hazardous materials site				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
Impact HAZ-4: Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact HAZ-5a: Be located in or near state responsibility areas or very high fire hazard severity zones and substantially impair an adopted emergency response plan or emergency evacuation plan				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact HAZ-5b: Be located in or near state responsibility areas or very high fire hazard severity zones and exacerbate wildfire risks and expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact HAZ-5c: Be located in or near state responsibility areas or very high fire hazard severity zones and require infrastructure that may exacerbate fire risk				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact HAZ-5d: Be located in or near state responsibility areas or very high fire hazard severity zones and expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact HAZ-6: Result in an impact on public health related to methylmercury bioaccumulation in fish				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Impact HAZ-7: Result in an impact on public health due to an increase in harmful algal blooms				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
Impact HAZ-8: Result in exposure to nuisance problems or spread of mosquito- or vector-borne illnesses				
<i>Construction and Operation</i>	No Project	NI/NE	-	-
	1, 2, 3	LTS/NE	-	-
Climate Change				
Effect CC-1: Project-related climate change effects				
<i>Operation</i>	No Project	NE	-	-
	1A, 2	NE	-	-
	1B, 3	NE, B	-	-
Indian Trust Assets				
Effect ITA-1: Affect current activities within an ITA				
<i>Construction</i>	No Project	NE	-	-
	1, 2, 3	NE	-	-
<i>Operation</i>	No Project	NE	-	-
	1, 2, 3	SA	Mitigation Measure FISH-2.1: Wilkins Slough Flow Protection Criteria	NE
Environmental Justice and Socioeconomics				
Effect EJ-1: Disproportionate and Adverse Effects on Minority Populations				
<i>Construction and Operation</i>	No Project	NE	-	-
	1, 2, 3	SA	Mitigation Measure AQ-1.1: Zero Emission and/or Near Zero Emission Vehicles and Off-Road Equipment Mitigation Measure AQ-1.2: Offset Construction and Operation-Generated Criteria Pollutants in CCAPCD, GCAPCD, and YSAQMD Mitigation Measure AQ-2.1: Recreational Boat Emissions Minimization Plan Mitigation Measure AQ-2.2: Offset Operation-Generated Criteria Pollutants in CCAPCD and GCAPCD	SA
Effect EJ-2: Disproportionate and Adverse Effects on Low-Income Populations				
	No Project	NE	-	-

Impact	Alternative	CEQA/ NEPA Finding	Mitigation Measure	Finding with Mitigation
<i>Construction and Operation</i>	1, 2, 3	SA	Mitigation Measure AQ-1.1: Zero Emission and/or Near Zero Emission Vehicles and Off-Road Equipment Mitigation Measure AQ-1.2: Offset Construction and Operation-Generated Criteria Pollutants in CCAPCD, GCAPCD, and YSAQMD Mitigation Measure AQ-2.1: Recreational Boat Emissions Minimization Plan Mitigation Measure AQ-2.2: Offset Operation-Generated Criteria Pollutants in CCAPCD and GCAPCD	SA
Effect SOC-1: Substantial Adverse Effects on Regional Economics				
<i>Construction and Operation</i>	No Project	NE	-	-
	1, 2, 3	NE, B	-	-
Effect SOC-2: Substantial Adverse Effects on Local Economics (Local Government Fiscal Conditions and Recreational Economics)				
<i>Construction and Operation</i>	No Project	NE	-	-
	1, 2, 3	NE, B	-	-
Effect SOC-3: Substantial Adverse Effects on Agricultural Economics				
<i>Construction</i>	No Project	NE	-	-
	1, 2, 3	NE	-	-
<i>Operation</i>	No Project	NE	-	-
	1, 2, 3	NE, B	-	-
Effect SOC-4: Substantial Adverse Effects on Municipal and Industrial Water Use Economics				
<i>Construction</i>	No Project	NE	-	-
	1, 2, 3	NE	-	-
<i>Operation</i>	No Project	NE	-	-
	1, 2, 3	B	-	-

Notes:

There are no NEPA conclusions for Impact AG-1, Impact AQ-1, Impact AQ-2, or Impact TCR-1.

There are no CEQA conclusions for Impact AG-3, Impact AQ-3, Impact CC-1, Impact ITA-1, Impact EJ-1, Impact EJ-2, Impact SOC-1, Impact SOC-2, Impact SOC-3, or Impact SOC-4.

CCAPCD = Colusa County Air Pollution Control District
GCAPCD = Glenn County Air Pollution Control District
YSAQMD = Yolo-Solano Air Quality Management District
NI = CEQA determination of no impact
LTS = CEQA determination of less-than-significant impact
LTSM = CEQA determination of less than significant with mitigation
S = CEQA determination of significant impact
SU = CEQA determination of significant and unavoidable
B = NEPA conclusion of beneficial effects
NE = NEPA conclusion of no effect or no adverse effect
AE = NEPA conclusion of adverse effect
SA = NEPA conclusion of substantial adverse effect