

Executive Summary

ES.1 Introduction

This executive summary provides background information for the Sites Reservoir Project (Project), identifies the purpose of preparing this Final Environmental Impact Report/Environmental Impact Statement (Final EIR/EIS), 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 the 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. In November 2021, the Authority and Reclamation issued a Revised Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement

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.

(RDEIR/SDEIS) as a complete revision of the 2017 Draft EIR/EIS to reflect changes to the Project that occurred since the issuance of the 2017 Draft EIR/EIS.

There are several differences in the facilities and operational characteristics between the alternatives evaluated in the 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 the 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 the Colusa Basin Drain (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 the Tehama-Colusa (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; and Wilkins Slough bypass flow.

This Final EIR/EIS incorporates the whole of the RDEIR/SDEIS. Additional information about the differences between the alternatives can be found in Appendix 2B, *Additional Alternatives Screening and Evaluation*. As part of this Final EIR/EIS analysis, refinements have been made to the Project description. These Project refinements are detailed in Master Response 2, *Alternatives Description and Baseline*, and in Chapter 2, *Project Description and Alternatives*, and include:

- Saddle Dam 3 and Saddle Dam 5 emergency release structures eliminated from Alternatives 1 and 3.
- Vertical inlet/outlet (I/O) tower redesigned as sloped I/O tower.
- Two 23-foot-diameter I/O tunnels redesigned to one 32-foot-diameter I/O tunnel.

- Fall-run redd maintenance and spring pulse assistance added to Shasta Lake exchanges benefits modeled.
- Folsom Lake exchanges removed as a potential benefit.
- Operational dead pool volume reduced to 60 thousand acre-feet.
- Bend Bridge pulse protection criteria refined.
- Wilkins Slough flow criteria refined, eliminating the need for Mitigation Measure FISH-2.1 and specific operation criteria for the Fremont Weir Notch Project.
- Releases to south-of-Delta participants included in all water year types.
- Diversions to Sites Reservoir allowed only from September 1 to June 14.

ES.3 Document Overview

ES.3.1. Purpose of This Final EIR/EIS

The Authority and Reclamation have prepared this Final EIR/EIS to provide a response to comments submitted on the RDEIR/SDEIS, consistent with CEQA and NEPA, and prior to the Authority issuing a Notice of Determination (NOD) (CEQA Guidelines §§ 15089 and 15094) and prior to Reclamation issuing a ROD (40 Code of Federal Regulation [C.F.R.] § 1505.2).

The purpose of the Final EIR is to provide the necessary information regarding the Project and its impacts for the decision maker to determine whether a lead agency should approve the Project (CEQA Guidelines § 15132). This Final EIR includes:

- The revised RDEIR.
- Comments and recommendations received on the RDEIR.
- A list of persons, organizations, and public agencies commenting on the RDEIR.
- The responses of the Lead Agency to significant environmental points raised in the review and consultation process.

The purpose of the Final EIS, pursuant to NEPA, is to provide the decision maker the necessary information regarding the proposed action and its effects to determine whether to approve the Project. The Final EIS includes a summary of all alternatives; information and analyses submitted by state, Tribal, and local governments and other public commenters for consideration by the lead and cooperating agencies (40 C.F.R. § 1502.17); and Reclamation's response to comments on the SDEIS (40 C.F.R. § 1503.4).

ES.3.2. Intended Use of This Final EIR/EIS

The intended use of this Final EIR/EIS is to disclose the potential direct, indirect, and cumulative impacts of implementing the Project in accordance with CEQA and NEPA requirements. This Final EIR/EIS 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 Final EIR/EIS, 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 Final EIR/EIS, 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 Final EIR/EIS 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 Final EIR/EIS, 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 Final EIR/EIS to issue permits or other regulatory approvals. Tables 4-1 through 4-3 in Chapter 4, *Regulatory and Environmental Compliance: Project Permits, Approvals, and Consultation Requirements*, identify agencies that may use this Final EIR/EIS.

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 the RDEIR/SDEIS.

ES.4.1. 2017 Draft EIR/EIS Public Comments

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 the RDEIR/SDEIS.

ES.4.2. 2021 RDEIR/SDEIS Public Comments

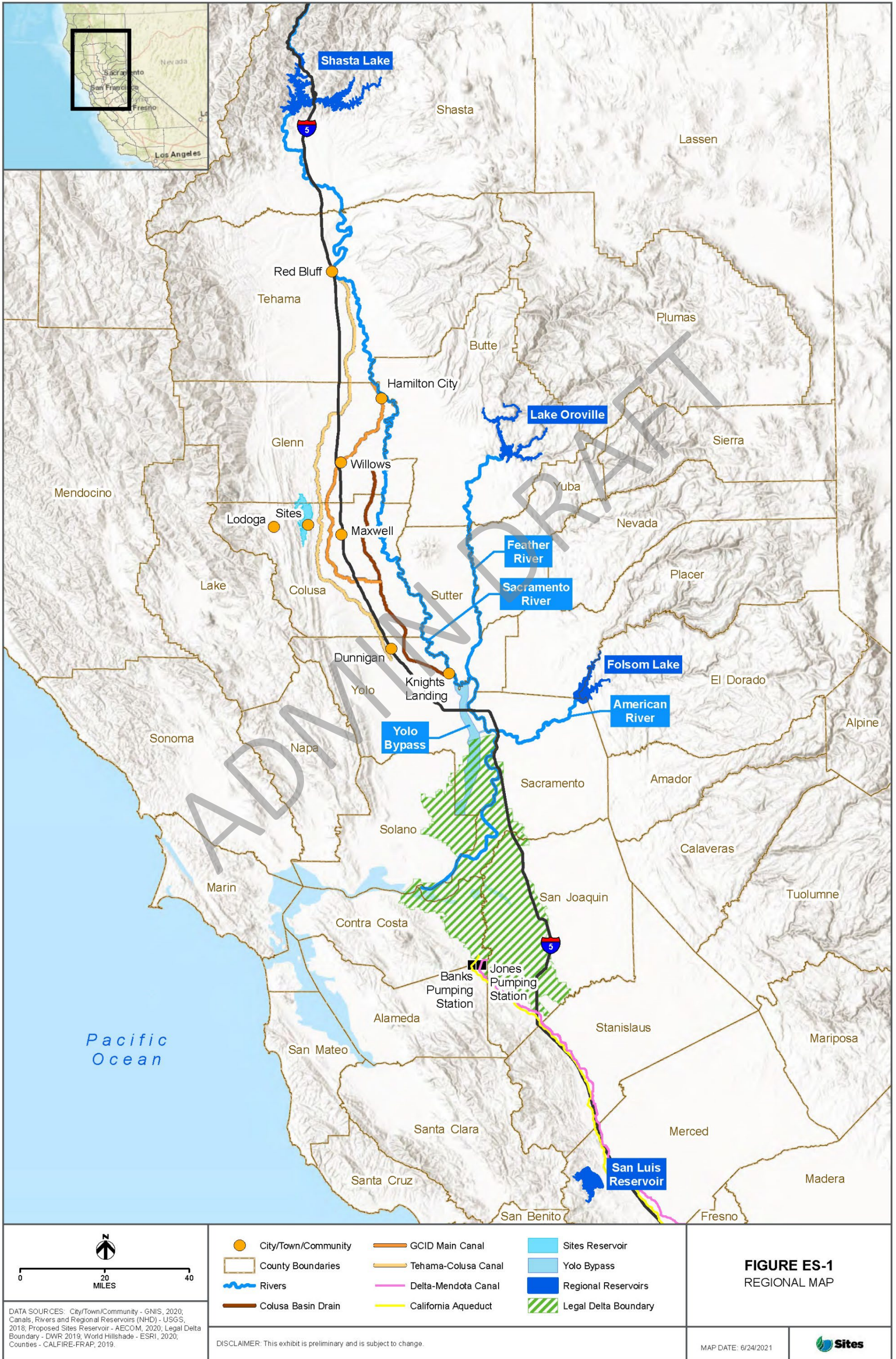
The Authority and Reclamation released the RDEIR/SDEIS in November 2021. The release of this public draft was noticed through a CEQA Notice of Availability on November 12, 2021, and through publication of the Notice of Availability in the Federal Register on November 12, 2021. The 2021 RDEIR/SDEIS was available for public and agency review and comment from November 12, 2021, to January 28, 2022 (i.e., public review period), and two virtual public hearings were held during the public review period. The Authority and Reclamation received approximately 101 unique letters and communications during the extended public comment period from federal, state, and local/regional agencies; elected officials; stakeholders; NGOs; and members of the public. A summary of the issues raised in these comments can be found in Section 1.3.3, *Comments Received on the 2021 RDEIR/SDEIS*.

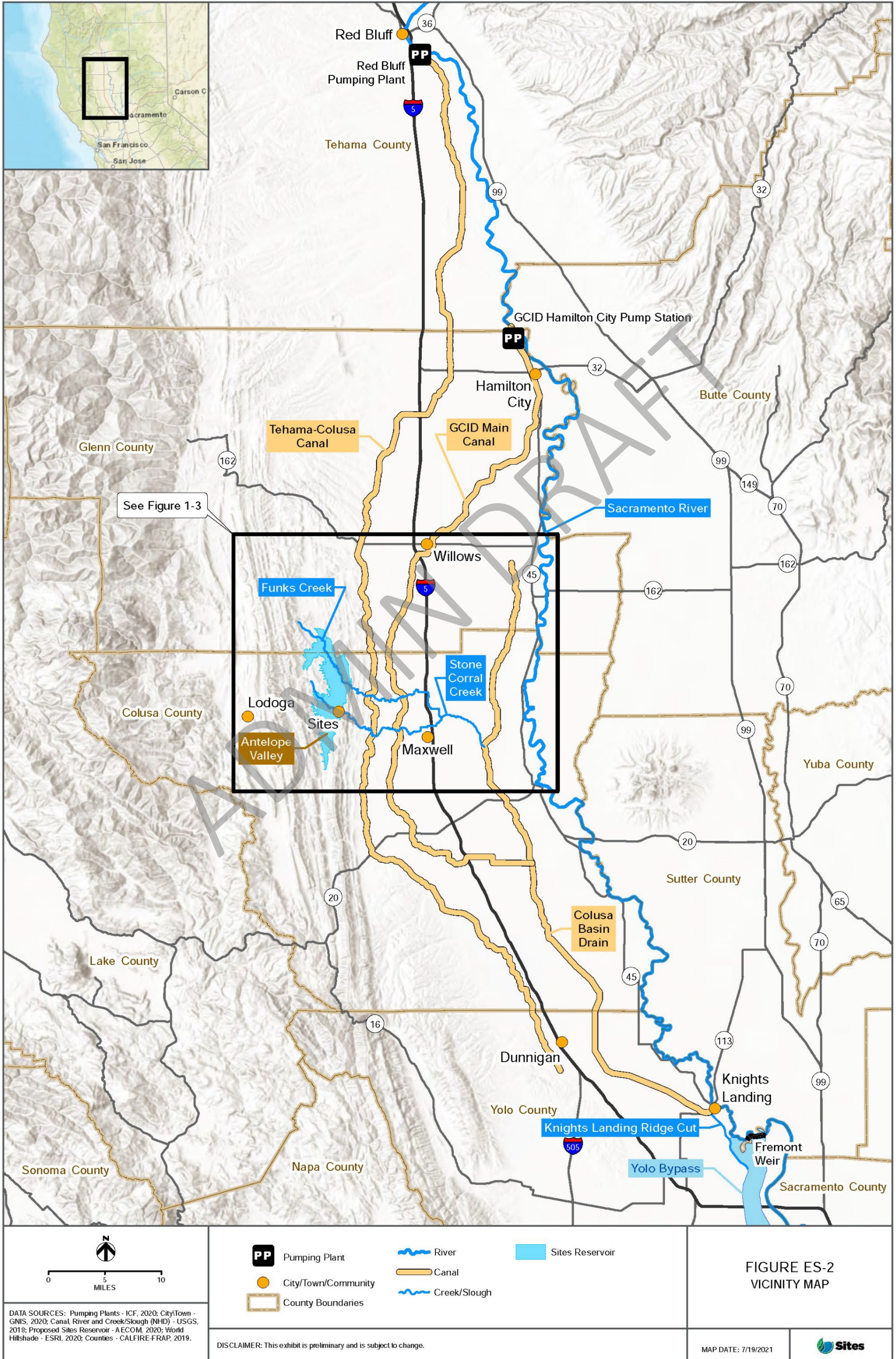
ES.4.3. Ongoing Public Involvement

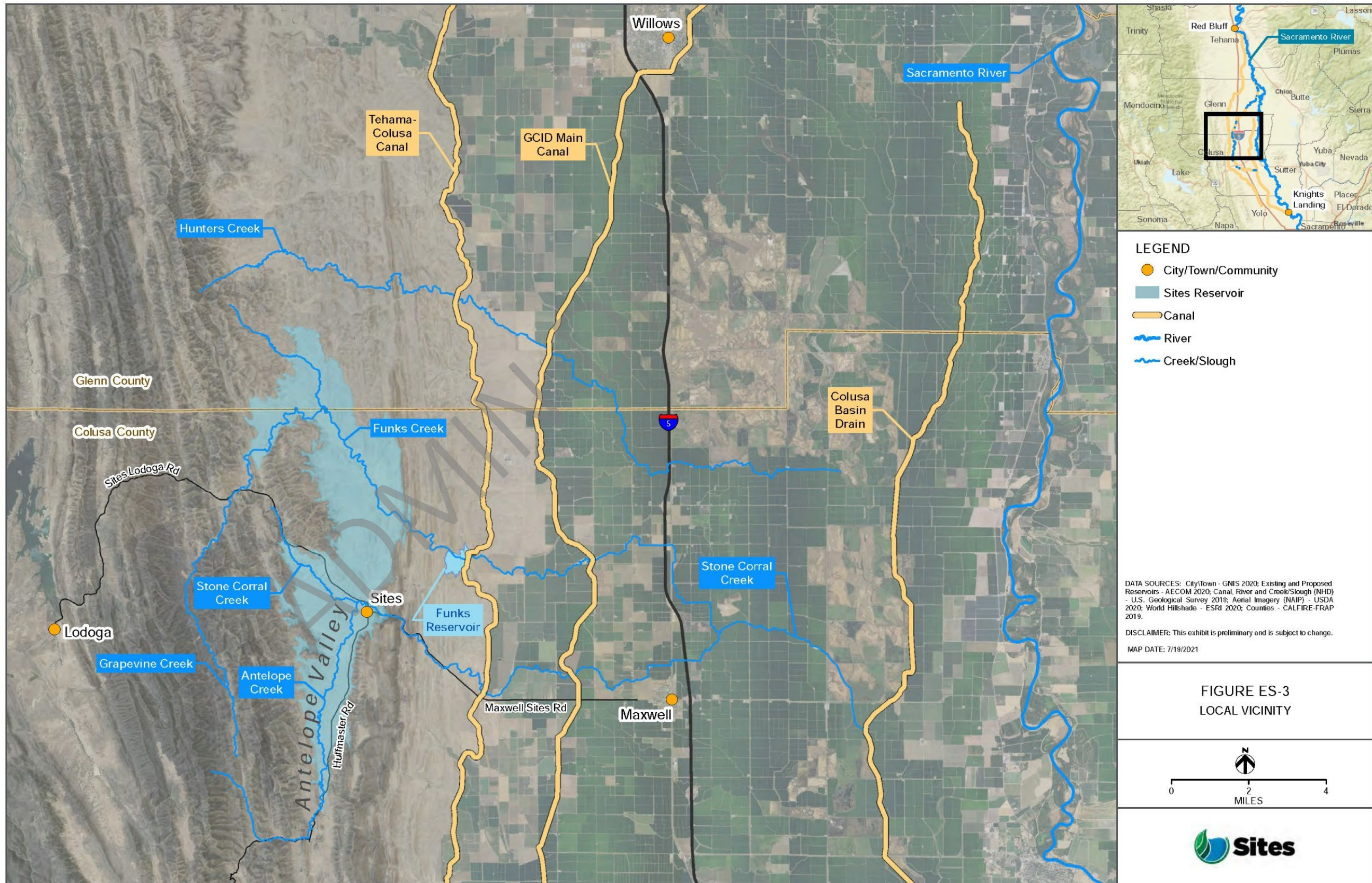
In addition to the scoping and public involvement processes required by CEQA and NEPA, the Authority and Reclamation have continued to meet with stakeholders, interested parties, tribes, and state and federal regulatory agencies. This includes required consultation with federal agencies, state agencies, and tribes, as well as coordination with NEPA Cooperating Agencies and CEQA Responsible and Trustee Agencies. The Authority and Reclamation 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, 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).







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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 the RDEIR/SDEIS, there were 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.



Figure ES-4
Sites Reservoir Project Storage Partners Service Areas

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 refuges.
- Delta ecosystem enhancement by providing water to convey food resources.

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 Final EIR/EIS 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 Final EIR/EIS.

Consistent with NEPA standards, the three action alternatives (i.e., Alternatives 1, 2, and 3) described in this Final EIR/EIS 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 Final EIR/EIS. 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/No Action Alternative*.

The following sections describe the alternatives analyzed in the Final EIR/SEIS.

ES.7.1. No Project Alternative and No Action Alternative

The purpose of the No Project Alternative/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 NOP 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. The existing conditions for the Final EIR/EIS have been defined as the 2020 environmental baseline conditions, as described in Section 3.2.1. 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 Final EIR/EIS, the term *No Project Alternative* describes both the No Project Alternative and No Action Alternative for CEQA and NEPA purposes, respectively. There may be instances

where *No Action Alternative* or *NAA* may have been retained but do not indicate any difference in the conditions represented. Because no new facilities would be constructed or operated, the No Project Alternative would not materially change conditions as compared to the 2020 environmental baseline, and this Final EIR/EIS 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 Final EIR/EIS, 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 Final EIR/EIS. 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, *Elements Common to All Action Alternatives*. 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 (Authority's Preferred Project)*.

Table ES-1. Defining Characteristics of Action Alternatives

Project Element	Alternative 1	Alternative 2	Alternative 3
Sites Reservoir Size	1.5 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 TRR East	Funks Reservoir TRR West	Same as Alternative 1
Conveyance Releases	Releases 1,000 cfs into new Dunnigan Pipeline discharging into the CBD	Releases of up to 1,000 cfs into new Dunnigan Pipeline discharging into the Sacramento River with 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	Same as Alternative 1	Same as Alternative 1

Project Element	Alternative 1	Alternative 2	Alternative 3
	water right holders and ecological function		
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)

Notes: CBD = Colusa Basin Drain; cfs = cubic feet per second; MAF = million acre-feet; SWP = State Water Project; TRR = Terminal Regulating Reservoir

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.

Due to the availability of federal funding (see Volume 3, Chapter 3, *Master Responses*, Master Response 2, *Alternatives Description and Baseline*), Alternative 3 is the Authority's preferred alternative and is the proposed project under CEQA.

[DRAFT LANGUAGE FOR REVIEW PENDING RECLAMATION'S IDENTIFICATION OF A PREFERRED ALTERNATIVE: Reclamation has identified Alternative 3 as being the environmentally preferred action due to Alternative 3 being the alternative that provides the greatest ecosystem benefit.].

ES.7.2.1. Elements Common to All Action Alternatives

Many facility and operation 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 and Appendix 2C, *Construction Means, Methods, and Assumptions*, of this Final EIR/EIS.

Facility Elements

Facility elements common to all action alternatives include:

- Improvements to and use of the existing Red Bluff Pumping Plant (RBPP), 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 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 14, 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 PGPs. 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 Final EIR/EIS 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

Alternative 1 was initially identified (see Volume 3, Chapter 3, Master Response 2, *Alternatives Description and Baseline*) in the RDEIR/SDEIS as the Authority's preferred alternative and the proposed 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 the Tehama-Colusa Canal Authority and those owned or operated by GCID to new and upgraded regulating reservoirs and into the new Sites Reservoir.

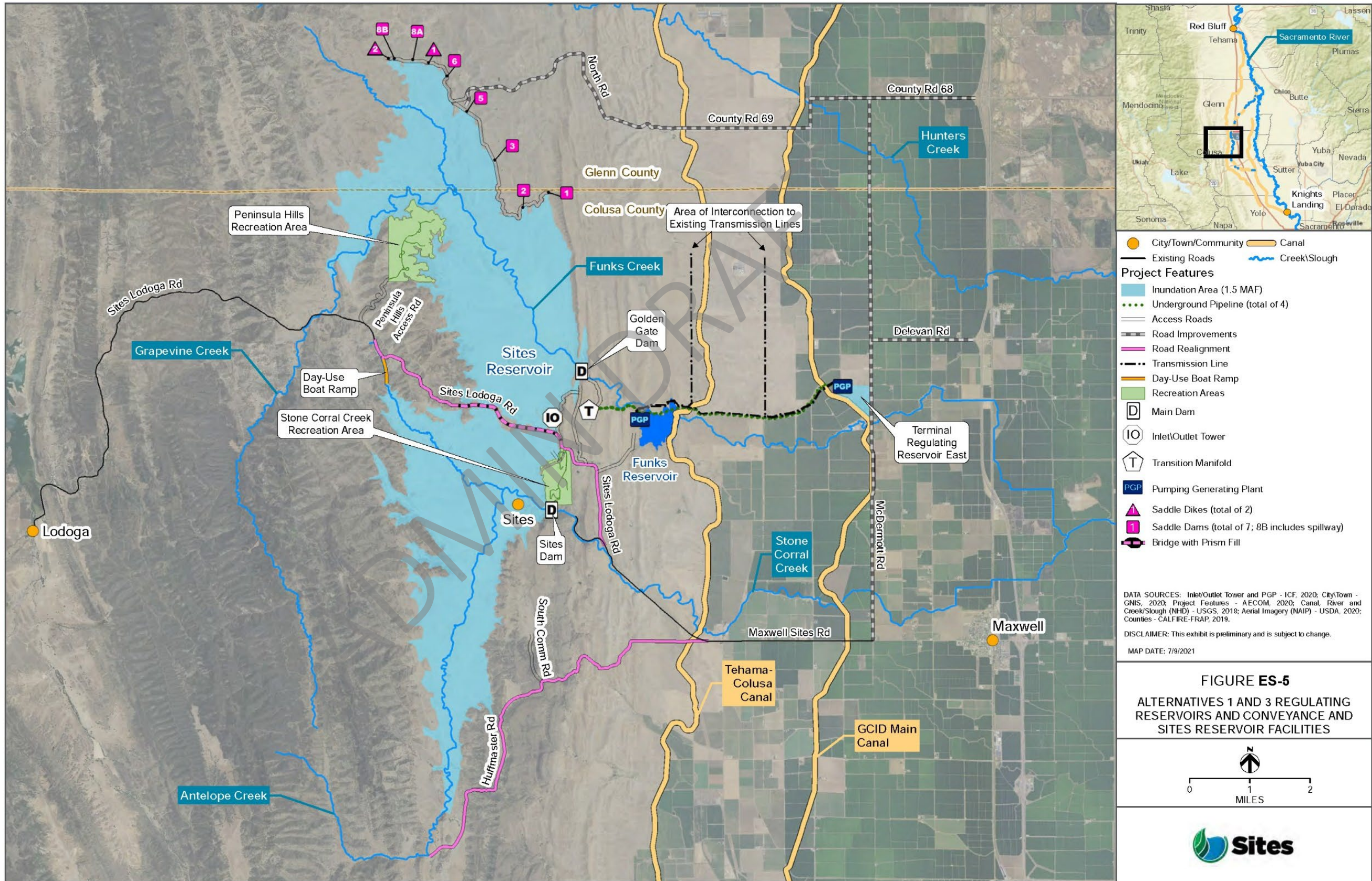
Releases from Sites Reservoir would be made to: (1) meet environmental purposes; (2) Storage Partners based on their requests to meet their water supply portfolio needs; (3) conduct operational exchanges with Reclamation in Shasta Lake; and (4) complete operational exchanges with DWR in Lake Oroville. 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.

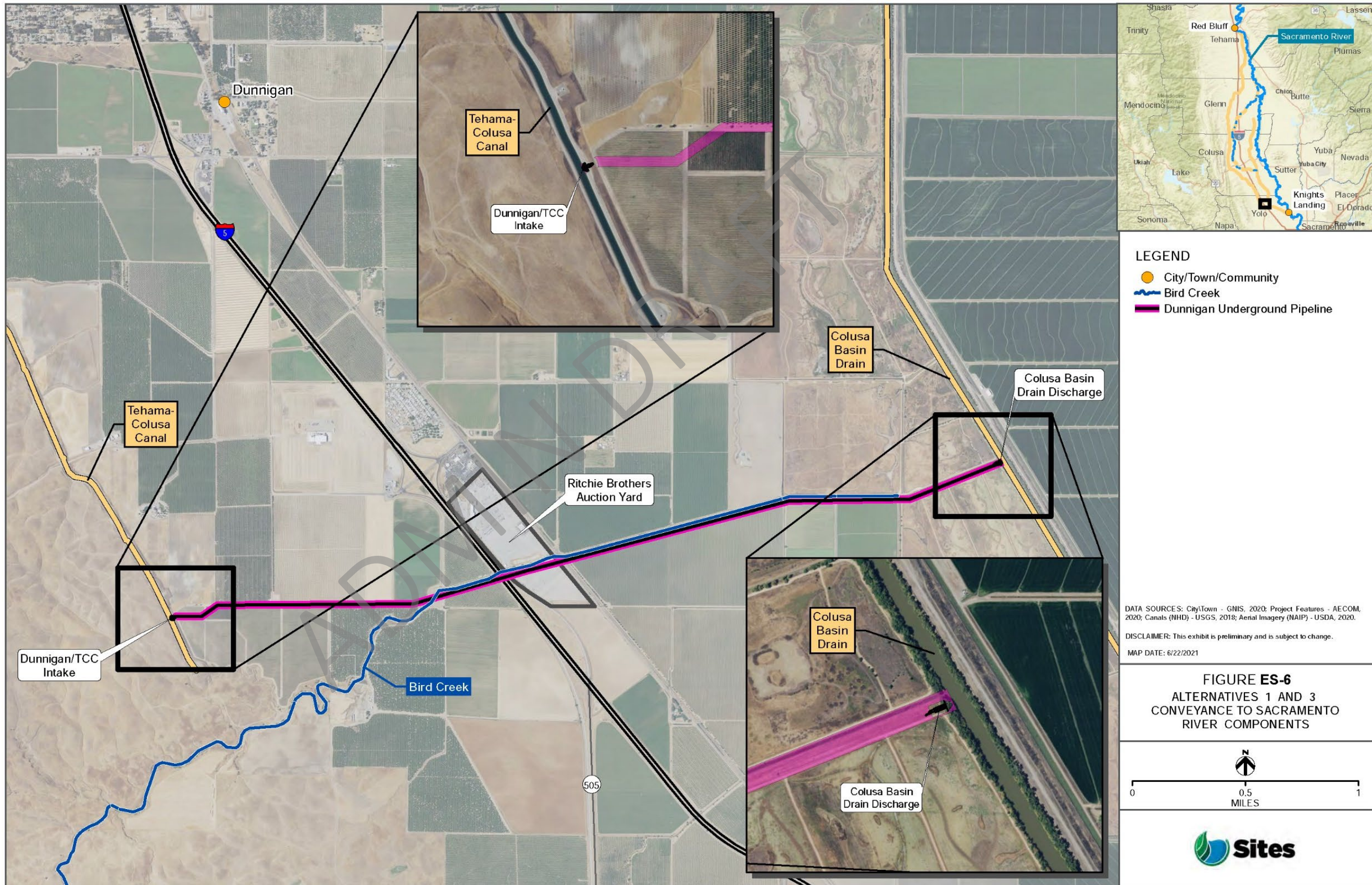
Construction roads, local roads, and maintenance roads would be developed or realigned to accommodate the reservoir facilities, including the realignment of Sites Lodoga Road with a new bridge over the reservoir.

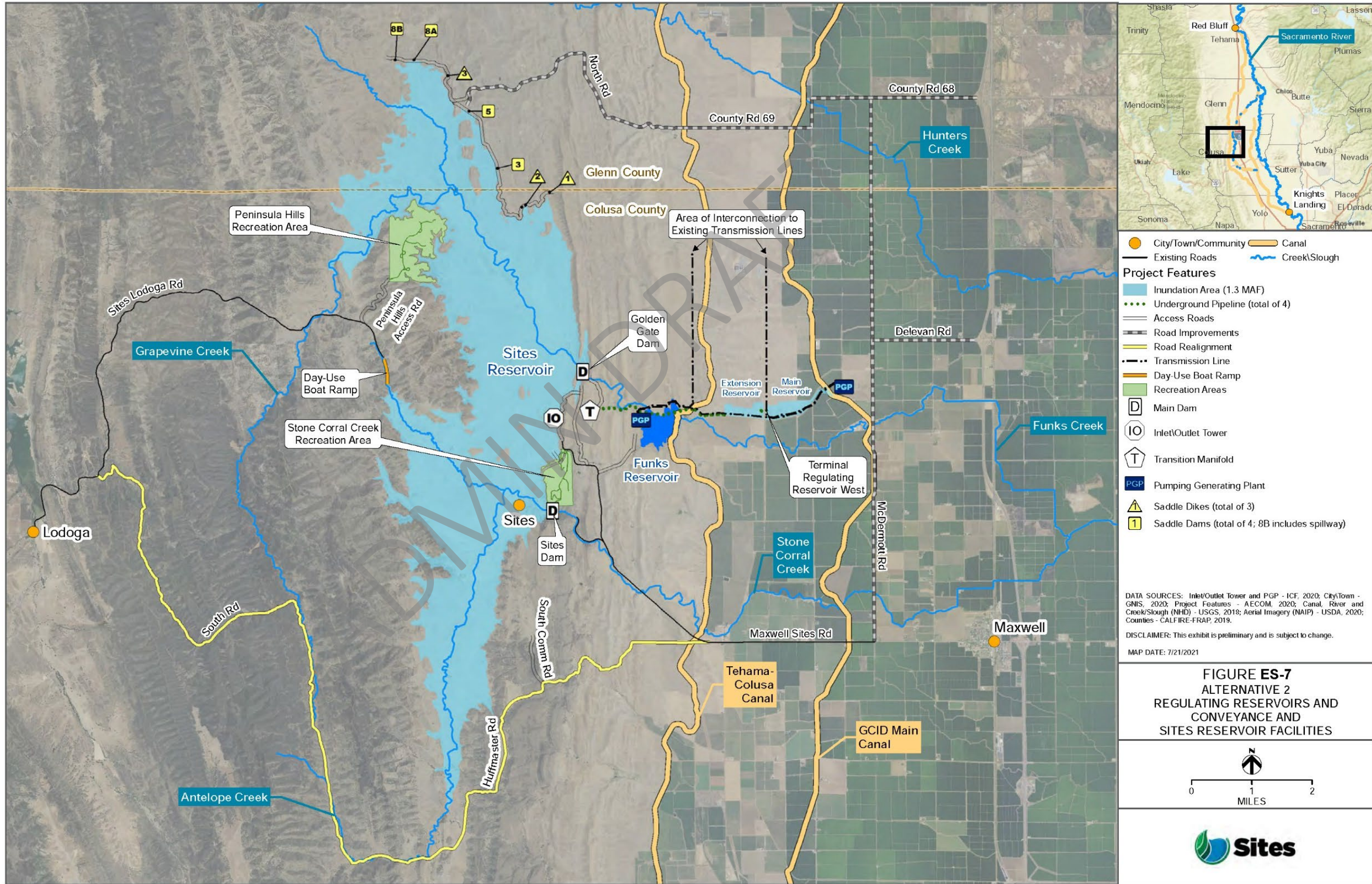
ES.7.2.3. Alternative 2

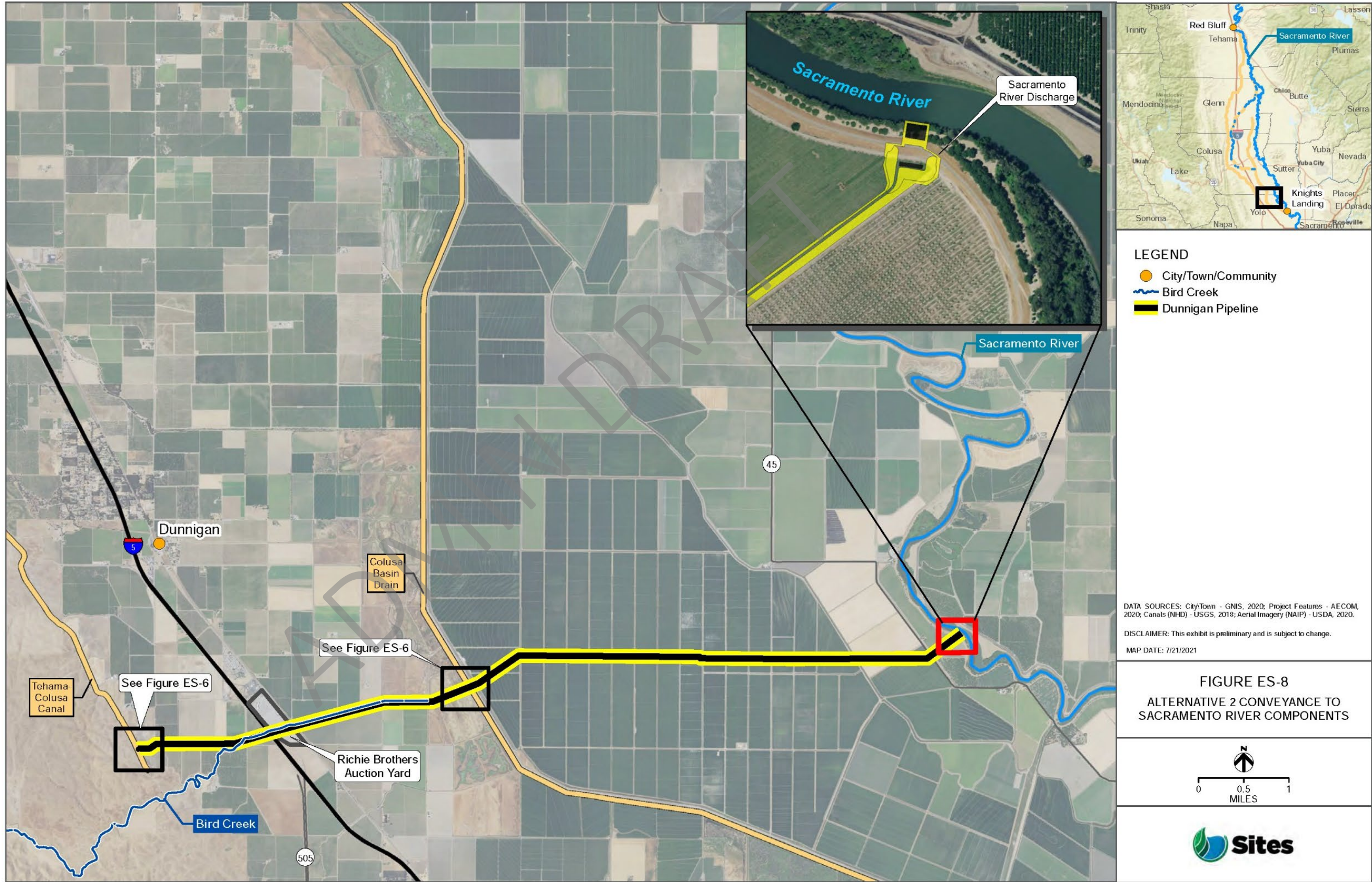
The unique features of Alternative 2 are shown in Figure ES-7 and ES-8 and include the following:

- 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 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.

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 (Authority's Preferred Project)

Due to the availability of federal funding (see Volume 3, Chapter 3, Master Response 2, *Alternatives Description and Baseline*), Alternative 3 is the Authority's preferred alternative and is the proposed project under CEQA. 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 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 Final EIR/EIS. 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 C.F.R. §§ 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 C.F.R. § 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 2020 environmental baseline for this Final EIR/EIS, 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 and 2021 RDEIR/SDEIS. 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 Final EIR/EIS.

Multiple chapters in this Final EIR/EIS 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 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 Final EIR/EIS Review and Approval

The Authority is responsible for certifying the EIR as adequate and in compliance with CEQA. The Authority will publish the response to comments on the RDEIR/SDEIS prior to certifying the Final EIR. If the Authority chooses to approve the Project, it will also be required to adopt “CEQA Findings,” a Mitigation Monitoring and Reporting Program, and, if necessary, a Statement of Overriding Consideration prior to approving the Project (see CEQA Guidelines §§ 15091–15093). These Project approval documents, which will memorialize the Authority’s choice amongst the alternatives developed in this EIR/EIS, would be referenced in a NOD (CEQA Guidelines § 15094). If Reclamation determines it will approve the proposed action, it is responsible for issuing a ROD following a 30-day period after a Notice of Availability for the EIR has been published with the U.S. Environmental Protection Agency. The ROD will also include consideration of a final biological opinion issued under federal Endangered Species Act (ESA) Section 7.

The Final EIR/EIS is available for review at these locations and websites.

- Sites Project Authority office
- Bureau of Reclamation office
- <https://sitesproject.org/environmental-review/>

Federal and state permitting agencies will also be using the Final EIR/EIS to assist in their issuance of permits or other approvals. These agencies include the CWC, which determines eligibility for Proposition 1 funding; the U.S. Army Corps of Engineers, which issues permits under Section 404 of the Clean Water Act and Sections 10 and 14 of the Rivers and Harbors Act; the U.S. Fish and Wildlife Service and National Marine Fisheries Service, which are responsible for enforcing the ESA; and the State Water Resources Control Board, which oversees petitions for water rights. A detailed discussion of agency roles and responsibilities and uses of the Final EIR/EIS to support issuance of permits and approvals is provided in Chapter 4.