1. Introduction

This Draft Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) has been prepared for the Sites Reservoir Project (Project) by the Sites Project Authority (Authority) and the U.S. Department of Interior, U.S. Bureau of Reclamation (Reclamation). The Authority is the lead agency under the California Environmental Quality Act (CEQA), and Reclamation is the lead agency under the National Environmental Policy Act (NEPA).

The Sites Project Authority, previously known as the Sites Joint Powers Authority, was formed as a joint powers authority pursuant to state law on August 26, 2010, to further the review, consideration, and development of the Project. The Authority was formed as a result of the enactment in November 2009 of Senate Bill 7X 2, the Safe, Clean, and Reliable Drinking Water Supply Act of 2010. This law allows for the formation of joint powers authorities by cities, counties, irrigation districts, and other local water districts and agencies within the applicable hydrological region for the design, acquisition, and construction of water infrastructure, ecosystem, water supply reliability, and other types of specified water projects. The Authority currently is composed of public entities located and operating in the Sacramento Valley (namely, City of Roseville, Colusa County Water District, County of Colusa, County of Glenn, Glenn-Colusa Irrigation District, Maxwell Irrigation District, Orland-Artois Water District, Placer County Water Agency, Proberta Water District, Reclamation District 108, Tehama-Colusa Canal Authority, Western Canal Water District, and Westside Water District).

The Project is substantively the same project that was the subject of a previous Notice of Preparation (NOP), which the California Department of Water Resources (DWR), as the previous CEQA lead agency, issued on November 5, 2001, to prepare an EIR under CEQA, and a previous Notice of Intent (NOI), which Reclamation published on November 9, 2001, to prepare an EIS under NEPA. The Project was formerly known as the North-of-Delta Offstream Storage (NODOS) project.

The Authority has assumed the role of the CEQA lead agency in lieu of DWR. If approved, the Authority would be responsible for constructing, operating, and maintaining the Project. Because of this change in lead agency, on February 2, 2017, the Authority issued a Supplemental NOP for the Draft EIR/EIS for the Project.

The Authority has been working and coordinating with a number of water agencies throughout the state on the Project. Pursuant to Proposition 1 (2014), the Water Quality, Supply, and Infrastructure Improvement Act of 2014, the Authority has been developing an application to submit to the California Water Commission's Water Storage Investment Program (WSIP) for partial funding of the public benefits that the Project would create. Funds made available through the WSIP and interested water agencies would be used to construct and operate the Project. Consistently with the Authority's purpose and in accordance with the provisions of Chapter 8 of the Proposition 1, the Authority took over lead agency status for the Project in lieu of DWR.

Reclamation is the federal lead agency for the Project, for compliance with NEPA and other applicable federal regulations. Reclamation's involvement in the Project includes the following actions: 1) the development of a federal feasibility report, and related EIS under NEPA, to support potential funding by the federal government, pursuant to the CALFED Bay-Delta Authorization Act (Public Law 108-361); 2) the potential approval of the use of the Tehama-Colusa Canal for water diversion and conveyance of

water to Sites Reservoir; and 3) the coordinated operations of Central Valley Project (CVP) facilities and the Sites Reservoir Project.

In addition, Reclamation's involvement in the Project also could include: 1) potential federal funding of the Project pursuant to the Water Infrastructure Improvements for the Nation Act (Public Law 114-322); 2) participation in the power lines to and from the Sites Reservoir; 3) involvement in and jurisdiction over the potential electrical power generation from the Project; and 4) potential new legislative authority to acquire shares of the water managed by the Authority for federal conservation activities.

1.1 Project Description

The Project has not changed materially since the 2001 NOP issued by DWR and the 2001 NOI issued by Reclamation. A description of the Project is summarized in this section; a more detailed description is presented in Chapter 3 Description of the Sites Reservoir Project Alternatives.

The general location of the Project is shown in Figure 1-1. The locations of the Project facilities are depicted in Figure 1-2. The Sites Reservoir would be located approximately 10 miles west of the town of Maxwell, in both Glenn and Colusa counties. Other Project facilities would be located in Tehama, Glenn, or Colusa counties.

1.1.1 Offstream Reservoir and Associated Facilities

The Project would consist of a new, offstream storage reservoir with a capacity of up to 1.8 million acre-feet (MAF). The Sites Reservoir would be approximately 12,000 to 14,000 acres in size. It would be created by inundating the area around the unincorporated community of Sites, California, which is referred to locally as Antelope Valley.

Up to 11 dams would be needed to create the Sites Reservoir. There would be two main dams: the Golden Gate Dam on Funks Creek, and the Sites Dam on Stone Corral Creek. Both dams would have a height in the general range of 300 feet above the base. The Golden Gate Dam would have a crest length in the general range of 2,250 feet and the Sites Dam would have a crest length in the general range of 850 feet. There also would be up to nine saddle dams on the northern end of reservoir, between the Funks Creek and Hunters Creek watersheds. These dams would range from approximately 40 to 130 feet in height above the base, with crest lengths ranging from approximately 270 to 4,000 feet.

The Project also would include an inlet/outlet structure; a pumping plant, electrical switchyard and overhead power lines; and a tunnel approximately 4,000 feet long, connecting the pumping plant to the reservoir. The principal features of the Project, in addition to the main reservoir and associated facilities, are described in the following subsections.

1.1.2 Diversion and Conveyance Facilities

The Sites Reservoir would be filled via two existing Sacramento River diversions and associated canals, and a proposed new inlet/outlet structure and pipeline. The proposed pipeline would allow for diversion of water from the Sacramento River, and discharge of re-regulated water into the Sacramento River, into either of the existing canals, or into the Colusa Basin Drain. Water would be diverted (up to 2,100 cubic feet per second [cfs], depending on the availability of sufficient flows as described in Chapter 3 Description of the Sites Reservoir Project Alternatives) at the existing Tehama-Colusa Canal Authority (TCCA) Red Bluff Pumping Plant diversion on the Sacramento River, and conveyed using the existing

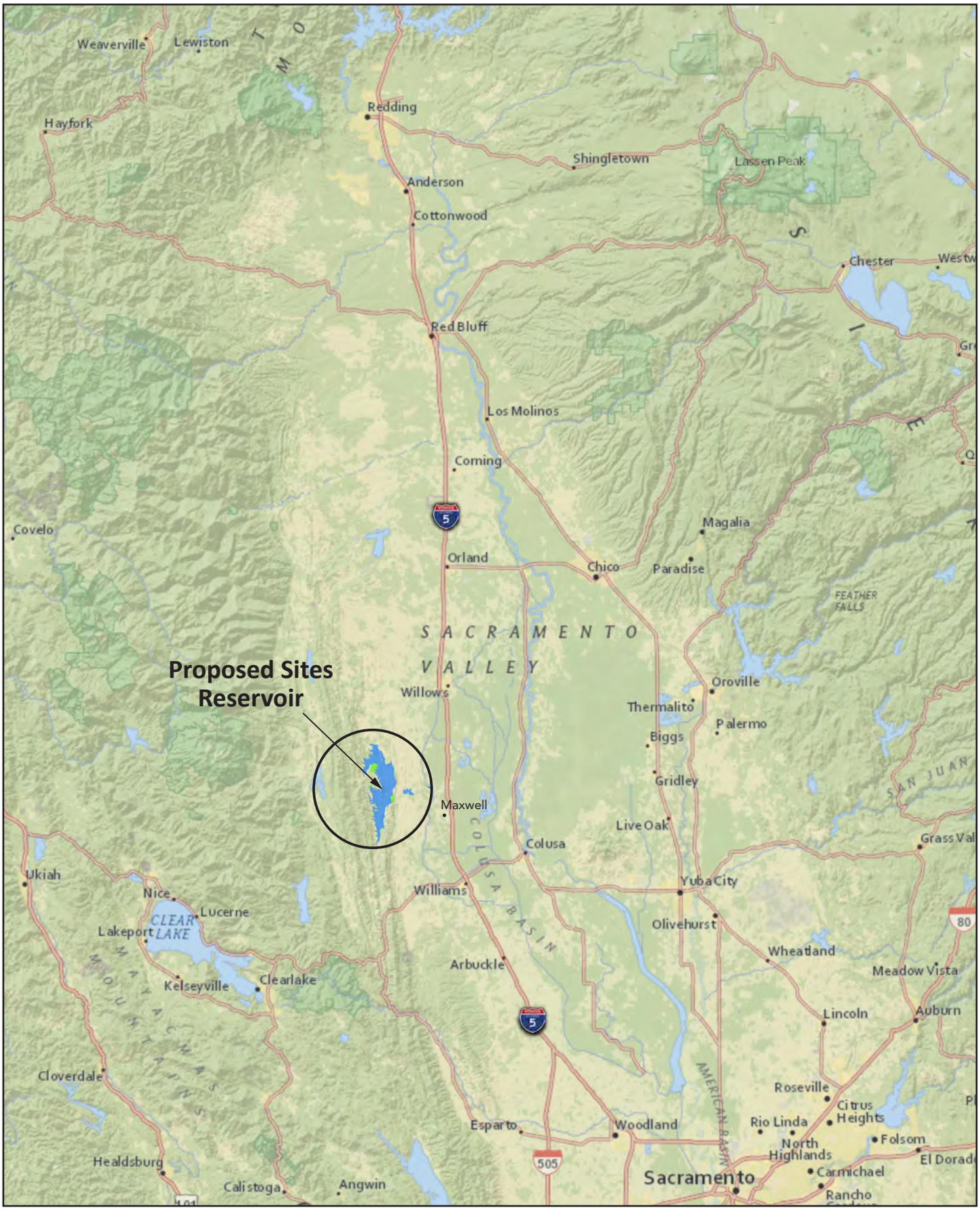


FIGURE 1-1
Proposed Sites Reservoir Project Location
Sites Reservoir Project EIR/EIS

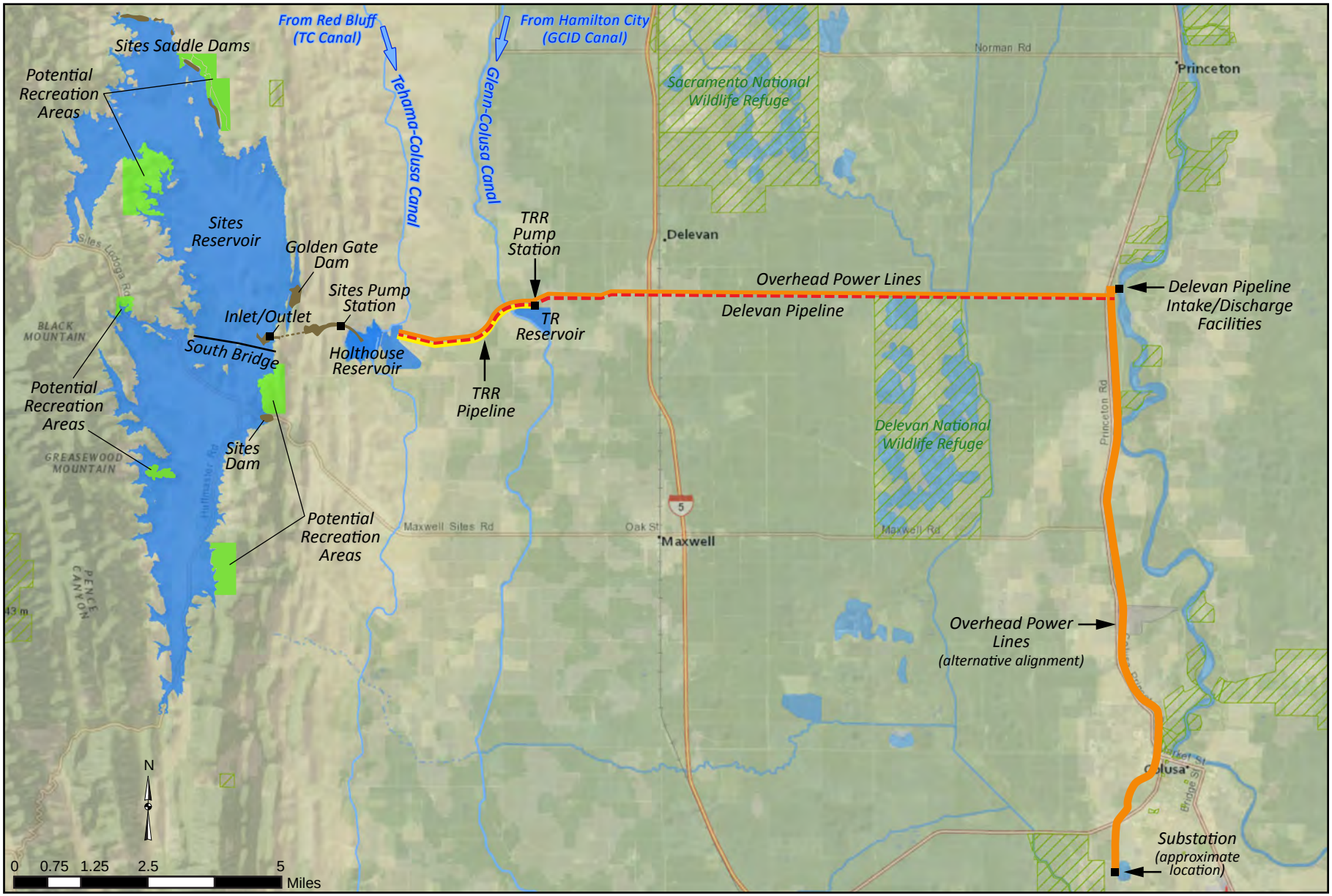


FIGURE 1-2
Proposed Sites Reservoir Project Facilities
Sites Reservoir Project EIR/EIS

Tehama-Colusa Canal. The existing Funks Reservoir, which is 1 mile downstream of the proposed Golden Gate Dam site and is used to regulate flows in the Tehama-Colusa Canal, would be expanded to form the new Holthouse Reservoir. The Holthouse Reservoir would be used to collect and regulate flows from the Tehama-Colusa Canal prior to conveyance to the Sites Reservoir. The new Holthouse Reservoir would be approximately 450 acres in size, with a storage capacity of approximately 6,500 acre-feet. Other proposed features associated with this diversion and conveyance include adding two pumps to the existing Red Bluff Pumping Plant; modifying the existing Tehama-Colusa Canal to connect to the new Holthouse Reservoir; constructing various facilities at the Holthouse Reservoir (including a new dam, an inlet/outlet structure, a spillway, and stilling basin); relocating an existing power line; and constructing an approach channel approximately 6,300 feet long, from the Holthouse Reservoir to the pumping plant for the Sites Reservoir.

Water would be diverted (up to 1,800 cfs, depending on the availability of sufficient flows as described in Chapter 3 Description of the Sites Reservoir Project Alternatives) at the existing Glenn-Colusa Irrigation District (GCID) Hamilton City Pump Station diversion and conveyed using the existing GCID Main Canal. A new reservoir (the Terminal Regulating Reservoir [TRR]) would be constructed to the east of the new Holthouse Reservoir to collect and regulate flows from the GCID Main Canal. The TRR would be approximately 200 acres in size, with a storage capacity of approximately 1,200 to 2,000 acre-feet. Other proposed features associated with this diversion and conveyance include modifying the GCID Main Canal to connect to the TRR; constructing a pump station, electrical switchyard, and overhead power lines at the TRR; and constructing a pipeline approximately 3.5 miles long to convey water from the TRR to the Holthouse Reservoir prior to conveyance to the Sites Reservoir.

A new, screened diversion would be established at Sacramento River Mile 158.5, immediately downstream of the existing Maxwell Irrigation District intake and across the river from the Moulton Weir. The diversion facility would include a pumping plant, electrical switchyard, and overhead power line, as well as associated maintenance and electrical facilities and a forebay. A pipeline approximately 13.5 miles long (the Delevan Pipeline) would be used to convey water to the new Holthouse Reservoir prior to conveyance to the Sites Reservoir. The Delevan Pipeline could be constructed to divert water from the Sacramento River, to release water from the new Sites Reservoir system into the Sacramento River, or for both functions. For diversion, the capacity would be 2,000 cfs; for normal release, the capacity would be approximately 1,500 cfs. Short-term release capacity would be up to approximately 2,500 cfs.

1.1.3 Potential Power Generation

One or more of the pumping plants could potentially be used to move water for hydropower generation, which would be used to complement solar and wind power sources at times when such sources are not operating at full capacity. It is important to note that the Project facilities will be designed and operated first to sustain the Project's water storage and delivery objectives. The Authority will then evaluate whether to proceed with the hydropower component of the Project. If the Project chooses to pursue hydropower generation that would be offered in the energy and/or the ancillary markets (including renewable integration services), it would pursue the approval process required for hydropower generation.

1.1.4 Other Facilities

The Project would include the development of up to five recreational areas that could be used for boating, camping, picnicking, fishing, swimming, and/or hiking, although a maximum of three areas is anticipated.

In addition, new roads and/or a bridge would be constructed to provide access to the Project facilities and over the Sites Reservoir, and some existing roads would be relocated or improved. The Project also would include a field office and maintenance yard. New overhead power lines would connect the pumping/generating facilities and their associated electrical switchyards to existing transmission lines in the Project area. As explained in greater detail in Chapter 3 Description of the Sites Reservoir Project Alternatives, two alternative routes are under consideration for the power lines; these routes are shown in Figure 1-2.

1.2 Project Operations

The operations evaluated in this environmental document for all alternatives were developed to provide a range of statewide benefits including ecosystem enhancement actions; improving water supply reliability for statewide agricultural, urban, and environmental uses (including increasing the survival of anadromous and endemic fish); and improving water quality in the Delta. The majority of the alternatives would also provide flexible hydropower generation to support integration of renewable energy sources. The Project is intended to improve overall system reliability by making more water available, at any given time, for release and use for a variety of potential benefits.

The operations for the Project incorporate three primary components: 1) operating criteria for the diversion of excess water (rate, duration, season, and water year type) from the Sacramento River; 2) operating criteria for timing and rate of releases from the Sites Reservoir to achieve the primary objectives of the Project (and associated benefits) in specific year types (such as drought or driest periods) and other hydrologic conditions; and 3) operations of the Project in cooperation with the State Water Project (SWP) and CVP operations, including Trinity Lake, Shasta Lake, Lake Oroville, and Folsom Lake.

The Authority and Reclamation have developed five action alternatives for detailed evaluation in the Draft EIR/EIS: Alternatives A, B, C, C_1, and D. A brief summary is provided in the following subsections. Chapter 2 Alternatives Analysis describes the process for arriving at these alternatives. The detailed description of the alternatives is presented in Chapter 3 Description of the Sites Reservoir Project Alternatives. All the alternatives would include diversions from the Sacramento River, when sufficient flows were present for diversion at the existing Red Bluff Pumping Plant (up to 2,100 cfs) and Hamilton City Pumping Plant (up to 1,800 cfs). The operations and diversion approach are further described in Chapter 3:

- Alternative A: 1.3-MAF Sites Reservoir, new Delevan Pipeline (2,000-cfs intake and 1,500-cfs release), and capability to generate hydropower.
- Alternative B: 1.8-MAF Sites Reservoir, new Delevan Pipeline (1,500-cfs release only), and capability to generate hydropower.
- Alternative C: 1.8-MAF Sites Reservoir, new Delevan Pipeline (2,000-cfs intake and 1,500-cfs release), and capability to generate hydropower.
- Alternative C_1: Substantially similar to Alternative C, but without the capability to generate hydropower.
- Alternative D: 1.8-MAF Sites Reservoir, new Delevan Pipeline (2,000-cfs intake and up to 1,500-cfs release), and capability to generate hydropower. Water operations would be conducted to provide for increased public benefits pursuant to Proposition 1 (2014) and would allow water agencies in the

Sacramento Valley and across the State more flexibility to meet customer demands and environmental needs, especially in dry and critical years. This alternative also includes a slightly different alignment for the Delevan Pipeline and different alignment for the Project power lines. Whereas the other alternatives involve an east-west power line alignment that follows the alignment of the Delevan Pipeline, Alternative D would entail a north-south alignment roughly along Highway 45 to connect the new point of diversion on the Sacramento River near the Moulton Weir to a new substation near the City of Colusa, which would tie into an existing power line.

1.3 Project Background

The CEQA Project objectives are important elements of an EIR to document the reasons for undertaking the Project and define the objectives that are to be achieved by the Project. The NEPA purpose and need statement describes the underlying purpose and need to which the NEPA lead agency is responding by proposing alternatives for the action. This section describes the CEQA Project objectives and the NEPA purpose and need of the Project.

Consistent with the requirements of CEQA and NEPA, needs and objectives were considered and developed in an iterative manner so that a more thorough understanding of each need and objective could be developed. The Authority and Reclamation relied on several sources of information during the initial needs and objectives development process. The following subsections summarize the decades of evaluation and study associated with the identified need for additional surface water storage in the Sacramento Valley.

1.3.1 Previous Studies and Need for Reservoirs in the Western Sacramento Valley

The need for Northern California reservoir storage has been identified for more than 100 years, to reduce potential flood damage in the Sacramento Valley and provide water supplies to other parts of California. The U.S. Geological Survey (USGS) proposed a plan in 1919 (known as the 1919 Marshall Plan) to construct reservoirs, along both the western and eastern foothills of the Sacramento Valley, connected by canals to convey the water to the San Francisco Bay Area and areas located south of the Delta (California State Irrigation Association, 1919). The California Department of Public Works (DPW) (a predecessor agency to DWR) issued Bulletin No. 25 in 1930, which presented the State Water Plan to address these needs, including construction of a reservoir near Millsite on Stony Creek (located downstream of future proposed locations of Black Butte and Newville reservoirs) (DPW, 1930). However, the Millsite Reservoir was not included in the facilities to be initially constructed. Many facilities that were recommended for the initial construction phase in Bulletin No. 25 were implemented under the CVP by the mid-1950s.

As the CVP facilities were being constructed after World War II, California began investigations to meet additional water needs through development of the SWP. In 1957, DWR published Bulletin No. 3, which identified new facilities to provide flood control in Northern California and water supplies to the San Francisco Bay Area, San Joaquin Valley, and San Luis Obispo and Santa Barbara counties in the Central Coast Region, and Southern California (DWR, 1957). The proposed reservoirs in the 1957 California Water Plan included a 174,000-acre-foot reservoir on Redbank Creek (Schoenfield Reservoir); a 950,000-acre-foot reservoir and power plant on North Fork Stony Creek (Newville Reservoir), which also would store water from a proposed upstream 67,000-acre-foot reservoir on Thomes Creek (Paskenta Reservoir) and water from the existing East Park Reservoir on Stony Creek; and a 48,000-acre-foot offstream storage reservoir on Stone Corral and Funks creeks (Golden Gate Reservoir, now known as

Sites Reservoir). The 1957 California Water Plan considered that these reservoirs would operate in an integrated manner with the proposed 50,000-acre-foot Black Butte Reservoir on Stony Creek, which was under development at that time by the U.S. Army Corps of Engineers (USACE).

Subsequent studies completed by DWR evaluated the potential for small reservoirs on several western foothill streams, including Stone Corral Creek and Funks Creek near the Sites Reservoir location, for the purposes of flood control (DWR, 1964). However, both the 1964 study and subsequent studies indicated that small flood control-only reservoirs were not the most economical plan to reduce flooding in the Colusa Basin (DWR, 2001). In 1964, Reclamation evaluated construction of a 1.2-MAF Sites Reservoir to provide water supplies to serve lands located along an extended Tehama-Colusa Canal, downstream of Funks Reservoir.

The 1975 progress report prepared by DWR and the 1978 DWR Bulletin No. 76 evaluated several offstream reservoirs in the western foothills to provide additional water supplies to the SWP and CVP, as well as local flood control, irrigation water supplies, recreation, and fish enhancement benefits (CALFED Bay-Delta Program [CALFED], 2000a; DWR, 1978). The 1975 report and Bulletin No. 76 recommended construction of the 8.7-MAF Glenn Reservoir, with the 435-foot Rancheria Dam on Stony Creek and the 387-foot Newville Dam on North Fork Stony Creek. Water would be diverted from the Sacramento River at the upstream end of the Tehama-Colusa Canal and from Thomes Creek near Paskenta, with integrated storage at the existing Black Butte Reservoir. As an alternative to Glenn Reservoir, the 1975 report and Bulletin No. 76 also considered the 3.2-MAF Colusa Reservoir with 160- to 295-foot dams on Willow, Logan, Hunters, Funks, and Stone Corral creeks. Water would be diverted from the Sacramento River and conveyed to the reservoir in the existing Tehama-Colusa and GCID Main canals. Bulletin No. 76 also recommended using storage in the USACE-proposed Cottonwood Project, which would include the 1.1-MAF Dutch Gulch Reservoir and the 900,000-acre-foot Tehama Reservoir on Cottonwood Creek. Development of projects similar to Newville and Sites reservoirs also were analyzed by GCID in 1980 and Colusa Basin Drainage District in 1995.

Federal, State, and local agencies signed the Bay-Delta Framework Agreement in December 1994, which led to the adoption of the Bay-Delta Accord and initiation of the CALFED Program in 1995 (CALFED, 2000b). As described in CALFED Bay-Delta Program and North-of-the-Delta Offstream Storage, the CALFED Program initiated the evaluation of expanded surface water storage in the Sacramento Valley as part of a long-term comprehensive plan to restore the ecological health and improve water management to protect beneficial uses in the Delta and the Delta watershed (CALFED, 2000b). Recommendations in the Final EIR/EIS for CALFED included actions to increase reservoir storage in the Sacramento Valley upstream of the Delta through expansion of Shasta Lake and potential implementation of Sites Reservoir following additional studies.

In 2014, the Governor of California issued the California Water Action Plan as a 5-year roadmap for a comprehensive and practical approach to water resources management in California (California Natural Resources Agency et al., 2015). The 2015 *California Water Action Plan Implementation Report 2014-2018* described actions conducted in 2014 under the California Water Action Plan and activities to be completed by 2018 under the 10 major actions in the plan. One of the major actions (Action 6) was to "Expand Water Storage Capacity and Improve Groundwater Management," including use of funds provided by Proposition 1 to expand and/or improve use of existing storage capacity.

1.3.2 CALFED Bay-Delta Program and North-of-the-Delta Offstream Storage

As discussed above, potential locations and operations of offstream storage to be located in the western foothills of the Sacramento Valley were identified prior to the CALFED Program. However, during preparation of the CALFED EIS/EIR, information from those prior studies and results from additional analyses conducted under CALFED were considered in the identification of Sites Reservoir as a potential project to increase north-of-the-Delta offstream storage. The following paragraphs summarize the evaluation process conducted as part of the CALFED Program.

The CALFED Program was established to "develop and implement a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system" (CALFED, 2000b). The CALFED Program identified the need for up to 6 MAF of additional storage, including an additional 3 MAF of storage north of the Delta. The CALFED Program sought to build a framework for managing California's water resources, stating that "expanding water storage capacity is critical to the successful implementation of all aspects of the CALFED Program. Not only is additional storage needed to meet the needs of a growing population, but, if strategically located, such storage will provide much needed flexibility in the system to improve water quality and support fish restoration efforts. Water supply reliability depends on capturing water during peak flows and during wet years, as well as more efficient water use through conservation and recycling" (CALFED, 2000b). The CALFED Program began in May 1995 to address the complex issues that surround the Bay-Delta, with a cooperative interagency effort of 18 State and federal agencies having management or regulatory responsibilities for the Bay-Delta. In addition, the CALFED Program was a collaborative effort, including representatives of agricultural, urban, environmental, fishery, and business interests, Indian tribes, and rural counties who have contributed to the process.

The CALFED Program objectives were fourfold: 1) to restore the ecological health of a fragile and depleted Bay-Delta estuary; 2) to improve the water supply reliability for the State's farms and growing cities that draw water from the Delta and its tributaries, including 7 million acres of the world's most productive farmland; 3) to protect the drinking water quality of the 27 million Californians who rely on the Delta for their supplies; and 4) to protect the Delta levees that ensure their integrity as a conveyance and ecosystem. Surface storage is part of an overall water management strategy that incorporates other CALFED Program actions, such as conservation, water use efficiency, conveyance, transfers, groundwater storage and conjunctive use, and habitat restoration, to meet these Program objectives.

The CALFED Bay-Delta Authority and DWR, with technical assistance from Reclamation, initiated the Integrated Storage Investigation in 1997 to develop information to be considered in the evaluation of surface water storage projects in the CALFED EIS/EIR. The Integrated Storage Investigation considered five potential surface water storage projects: expansion of the CVP Shasta Lake; expansion of the Contra Costa Water District Los Vaqueros Reservoir; the In-Delta Storage Program on four Delta islands, which would pump water to and from the Delta channels, as needed, or would connect in-Delta storage to the export facilities in the south Delta; the Upper San Joaquin River Basin Storage Investigation to expand water storage; and the NODOS Investigation of a new offstream storage reservoir on the west side of the Sacramento Valley. The NODOS Investigation under the Integrated Storage Investigation was conducted in coordination with several local entities, including GCID and TCCA, which are members of the Authority.

Preliminary results from the Integrated Storage Investigation were used to inform the analysis of 12 potential surface water reservoir sites and several groundwater storage locations, including Sites

Reservoir, in the CALFED EIS/EIR. The range of alternatives considered, and the results of the screening analysis conducted in the CALFED EIS/EIR, are summarized in Chapter 2 Alternatives Analysis.

The 2000 CALFED Programmatic Environmental Impact Statement (PEIS)/EIR Preferred Program Alternative and associated CALFED Record of Decision (ROD) (CALFED, 2000c) recommended five surface water storage projects to be pursued with project-specific studies. These studies included Shasta Lake Enlargement, Los Vaqueros Reservoir Enlargement, Sites Reservoir, In-Delta Storage, and development of storage in the upper San Joaquin River Basin. As described in the CALFED ROD:

> …for actions contained within the Preferred Program Alternative that are undertaken by a CALFED Agency or funded with money designated for meeting CALFED purposes, environmental review will tier from the [CALFED] Final PEIS/R.

However, the CALFED ROD states that the Sites Reservoir Project would "require substantial technical work and further environmental review and development of cost-sharing agreements before decisions to pursue them as part of the CALFED Program" are made. These studies were completed as part of this EIR/EIS.

The preliminary studies in support of the CALFED PEIS/EIR considered more than 50 surface water storage sites throughout California and recommended more detailed study of the five sites identified in the ROD (CALFED 2000a, 2000b, 2000c). Consistent with the guidance in the CALFED ROD, this EIR/EIS relies on evaluations and alternatives development and screening included in the CALFED PEIS/EIR, and focuses on the subsequent action of evaluating the development of the Sites Reservoir Project.

Accordingly, because the Sites Reservoir Project is an action contained within the CALFED Preferred Program Alternative, the Sites Reservoir Project EIR/EIS tiers to the CALFED PEIS/EIR with respect to the consideration of the Sites Reservoir as compared to other reservoir projects in the western Sacramento Valley that were considered in the CALFED PEIS/EIR.

The CALFED ROD describes tiering as follows: Whenever a broad environmental impact analysis has been prepared and a subsequent, narrower analysis is then prepared on an action included within the entire program or policy, the subsequent analysis need only summarize the issues discussed in the broader analysis and incorporate discussions from the broader analysis by reference. This is known as tiering. Tiered documents focus on issues specific to the subsequent action and rely on the analysis of issues already decided upon in the broader programmatic review. Absent new information or substantially changed circumstances, documents tiering from the CALFED Final PEIS/EIR will not revisit the alternatives that were considered alongside CALFED's Preferred Program Alternative nor will they revisit alternatives that were rejected during CALFED's alternatives development process.

Because of the passage of time since the CALFED EIS/EIR and ROD, California water management facilities, regulatory requirements (including biological opinions, incidental take authorization, and species listings) and other circumstances and conditions have changed. As a result, in evaluating the environmental impacts from the development of the Sites Reservoir Project, this EIR/EIS provides new, augmented, and updated analyses to define the existing conditions and affected environment, the No Project and No Action alternatives, and the currently applicable regulatory requirements and decisions under the federal Endangered Species Act and the California Endangered Species Act. This EIR/EIS also provides new, augmented, and updated analyses of the Project alternatives (see Appendix 2A Alternatives Screening Process of this EIR/EIS), including a description of the alternatives screening process and

development of alternatives relevant to the Sites Reservoir Project from 1980 through today. The CALFED EIS/EIR is incorporated by reference in this EIR/EIS, and the relevant portions and conclusions of that prior document are described and explained where pertinent to environmental analyses and findings included in this EIR/EIS. The CALFED PEIS/EIR and associated documents are available electronically at http://calwater.ca.gov/calfed/library/Archive_EIS.html.

The CALFED ROD is available at www.calwater.ca.gov/content/Documents/ROD.pdf

1.4 Project Objectives, and Purpose and Need

The Project objectives, and the statement of purpose and need have not changed materially since the 2001 NOP, issued by DWR, and the 2001 NOI, issued by Reclamation. However, this Draft EIR/EIS elaborates on the objective and purpose stated in the 2001 NOP and NOI related to providing storage and operational benefits for water quality and other programs. The Authority and Reclamation also are considering a set of secondary Project objectives and purposes.

The primary objectives, and purpose and need for the Project are to provide surface water storage north of the Delta in order to:

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

The secondary objectives and purposes for the Project are to:

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

As a result of changing regulatory requirements and population growth, the challenges associated with meeting a variety of water demands including urban, environmental, and agricultural needs have increased over time since the initial construction and operation of the CVP and SWP. Consequently, the major water systems that depend on runoff in the Sacramento River and San Joaquin River watersheds continue to experience reduced flexibility in timing, location, and capacity to meet these multiple objectives. These increasing commitments continue to affect all reservoirs including large reservoirs within the Sacramento River watershed, as seen in decreasing end-of-water-year storage trends. Additionally, the effects of climate change including sea-level rise, variability and uncertainty associated with changing snow and rainfall patterns, and increased air temperatures will further impact operations

and supply availability. The proposed Project would divert and store water within the Sacramento River watershed when available during high-flow events and when not meeting other environmental and water supply requirements. This water would then be released for beneficial uses to meet Project objectives in compliance with various operating agreements (to be developed under the WSIP), and relevant permits and approvals. The Project's reliance on rainfall-produced Sacramento River tributary flows downstream of Shasta Lake and ability to store flows when available pursuant to water rights and regulatory requirements is intended to provide a new and resilient source of supply to assist in improving ecosystem conditions, water supply reliability, and Delta water quality,

1.4.1 Secondary Objectives and Purposes

1.4.1.1 Allow for Flexible Hydropower Generation to Support the Integration of Renewable Energy Sources

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

1.4.1.2 Develop Additional Recreational Opportunities

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

1.4.1.3 Provide Incremental Flood Damage Reduction Opportunities

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

1.5 Summary of CEQA and NEPA Requirements

This EIR/EIS is prepared jointly under the requirements of CEQA and NEPA. An overview of the applicable requirements for assessing environmental impacts is provided below.

1.5.1 CEQA Requirements

The California *CEQA Guidelines* (California Code of Regulations, Title 14, § 15000 et seq.) explain that the environmental analysis for an EIR must evaluate impacts associated with the project and propose

mitigation for any potentially significant impacts. All phases of a proposed project, including construction and operation, are evaluated in the analysis. Section 15126.2 of the *CEQA Guidelines* states:

> An EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects.
>
> The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, and human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected.
>
> An EIR must also discuss inconsistencies between the proposed project and applicable general plans and regional plans (*CEQA Guidelines* § 15125[d]).
>
> An EIR must describe any feasible measures that could minimize significant adverse impacts, and the measures are to be fully enforceable through permit conditions, agreements, or other legally binding instruments (*CEQA Guidelines* § 15126.4[a]). Mitigation measures are not required for effects that are found to be less than significant.

CEQA requires that an EIR include a discussion of alternatives to a proposed project to enable an evaluation of whether there are other means of achieving the project's basic goals and objectives, while avoiding or reducing the environmental effects of the project. Section 15126.6(b) of the *CEQA Guidelines* states that:

> … the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or could be more costly.

Pursuant to Section 15126(d) of the *CEQA Guidelines*, an EIR must describe and evaluate a reasonable range of alternatives that could potentially attain most of the basic project objectives and would avoid or substantially lessen any of the significant impacts of a proposed project. Section 15126.6(f) of the *CEQA Guidelines* provides guidance on the extent of the alternatives analysis required:

> The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision-making.

As described under Section 15126.6(d) of the *CEQA Guidelines*:

> The EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.

Section 15126.6(e)(1) of the *CEQA Guidelines* also requires analysis of a "No Project Alternative." The purpose of evaluating the No Project Alternative is to allow decision-makers to compare the potential consequences of the project with the consequences that would occur without implementation of the project.

1.5.2 NEPA Requirements

The Council on Environmental Quality's regulations for implementing NEPA specify that a federal agency preparing an Environmental Impact Statement (EIS) must consider the effects of a proposed action and alternatives on the environment; these include effects on ecological, aesthetic, historical, and cultural resources and economic, social, and health effects. Environmental effects are categorized as direct, indirect, and cumulative. An EIS must also discuss possible conflicts with the objectives of federal, state, regional, and local land use plans, policies, or controls for the area concerned; energy requirements and conservation potential; urban quality; the relationship between short-term uses of the environment and long-term productivity; and irreversible or irretrievable commitments of resources. An EIS must identify relevant, reasonable mitigation measures not already included in a proposed action or alternatives that could avoid, minimize, rectify, reduce, eliminate or compensate for the project's adverse environmental effects (40 Code of Federal Regulations [CFR] §§ 1502.14, 1502.16, 1508.8).

Like CEQA, NEPA requires consideration of a range of alternatives to a proposed project that could potentially attain most of the basic project objectives and accomplish the project purpose and need while avoiding or minimizing environmental impacts. The purpose of including alternatives in an EIS is to offer a clear basis for choice by the decision makers and the public as to whether or how to proceed with a proposed action or project.

According to NEPA regulations (40 CFR 1502.14), the alternatives section of an EIS is required to provide a rigorous exploration and objective evaluation of all reasonable alternatives, including the "No Action Alternative." The discussion of alternatives must present the impacts of the alternatives in sufficient detail to permit a reasoned choice between the alternatives. For alternatives that are not carried forward for detailed study, the EIS must include a brief discussion of the basis for this decision. NEPA requires substantial analysis of all the alternatives so that their comparative merits may be evaluated (40 CFR 1502.14[b]).

1.6 Existing Conditions/No Project/No Action Condition

Existing conditions and the future No Project/No Action alternatives were assumed to be similar in the Primary Study Area, given the generally rural nature of the area, and limited potential for growth and development in Glenn and Colusa counties within the 2030 study period used for this EIR/EIS, as further described in Chapter 2 Alternatives Analysis. As a result, within the Primary Study Area, it is anticipated

that the No Project/No Action Alternative would not entail material changes in conditions as compared to the existing conditions baseline.

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

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

1.7 Intended Use of this Draft EIR/EIS

The following paragraphs summarize the Authority and federal decision processes with respect to the use of this Draft EIR/EIS, and decisions made with respect to the consideration and ultimate approval of the Project.

1.7.1 Authority's Decision-making Process

Following lead agency (Reclamation and Authority) consideration of all comments received during public review of the Draft EIR/EIS and circulation of the Final EIR/EIS, the Authority's Board of Directors will hold a public meeting to consider certification of the Final EIR and decide whether to approve the Project or an alternative. A Notice of Determination documenting the decision will then be issued. To support a decision on the Project, the Authority's Board of Directors must prepare and adopt: written findings of fact for each significant environmental impact identified in the Final EIR/EIS; a Statement of Overriding Considerations, if needed; and a Mitigation Monitoring and Reporting Program to ensure implementation of the mitigation measures and Project revisions, if any, identified in the Final EIR/EIS.

The EIR/EIS is intended to be used by the Authority's Board of Directors when considering approval of the Project. The Authority's Board of Directors will use the Final EIR/EIS to consider approval of the entire Project.

1.7.2 Federal Decision-making Process

Federal decision making will be based on the information contained in the federal feasibility report, in compliance with the Federal Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (federal P&Gs), and information analyzed in compliance with NEPA (U.S. Water Resources Council, 1983).

Integral to the federal decision process are other legally required processes and information, such as biological opinions from the Federal Endangered Species Act consultation process and permits required by federal, state, and local laws. The federal decision process also includes consideration of input from other federal, state, and local agencies, concerned stakeholders, tribes, and the general public.

The final federal decision is documented in a ROD. The ROD will address the decision and the alternatives considered; the alternative(s) considered to be environmentally preferable; the factors that were considered; whether or not all practicable means to avoid or minimize environmental harm for the alternative selected have been adopted and, if not, why; any monitoring and enforcement program established to ensure identified mitigation measures are accomplished; and any significant comments received on the Final EIR/EIS.

Reclamation is the federal lead agency and, therefore, is responsible for the preparation and processing of the federal feasibility report and EIS. For efficiency, the EIS has been combined with an EIR, prepared by the Authority for compliance with the CEQA.

While the NEPA compliance process is a subset of the federal feasibility study process, there are important distinctions to make. The purpose of the NEPA process is to analyze and disclose the impacts of a range of alternatives, and to provide an opportunity for public review and comment prior to the final federal decision. The purpose of a federal feasibility report is to address engineering, economic, environmental, and financial aspects of alternatives, determine the potential benefits and costs, and determine if there is a federal interest in the implementation of a project.

Upon completion of the final federal feasibility report and the Final EIR/EIS, Reclamation's Mid-Pacific Regional Director will make a recommendation that will be submitted to the Commissioner of Reclamation for consideration. Then, the Commissioner will concur or modify the recommendation and forward the final federal feasibility report, Final EIR/EIS, and draft ROD to the Secretary of the Interior.

1.7.3 Other Uses and Users of the EIR/EIS

A variety of federal, state, and local agencies may use this EIR/EIS for approvals related to the Project, including approvals under the federal and California Endangered Species Acts, issuance of permits under the Clean Water Act, and agency approvals under other federal, state, and local laws and regulations.

Table 1-1 identifies the approvals and authorizations that are anticipated for the Project.

Table 1-1
Primary Anticipated Permits, Approvals, and Authorizations for the Sites Reservoir Project

Jurisdiction	Responsibility
Federal Agency Permits, Approvals, and Authorizations	
United States Department of the Interior, Bureau of Reclamation	• Prepare the EIS and issue the ROD as the representative NEPA lead agency for the Department of the Interior. The EIS must also comply with the following laws, regulations, and executive orders: – Federal Water Pollution Control Act (Clean Water Act), Sections 303, 401, 402, and 404 – Rivers and Harbors Act, Sections 9, 10, 14, and 408 – Federal Safe Drinking Water Act – Wild and Scenic Rivers Act – Fish and Wildlife Coordination Act – Marine Mammal Protection Act – Migratory Bird Treaty Act – Federal Clean Air Act – National Historic Preservation Act of 1966, Sections 106 and 110 – American Indian Religious Freedom Act – Native American Graves Protection and Repatriation Act – Executive Order 13186 (protection of migratory birds) – Executive Order 11990 (protection of wetlands) – Executive Order 12898 (environmental justice) – Executive Order 11988 (floodplain management) – Executive Order 13007 (protection of Indian Sacred Sites on federal land) • Responsible for CVP operations, including modifications of those operations related to storage, conveyance, or delivery of CVP water supplies • Prepare and submit biological assessment to USFWS and NMFS for consideration of issuance of biological opinions to document that federal actions by Reclamation will not cause jeopardy to the federally listed special-status species or adverse modification of their designated critical habitat • Develop Feasibility Report – for a State-sponsored project • Approve use of Tehama-Colusa Canal and diversion facilities • Coordinate operation of the CVP with the Project • Potentially fund Project through CALFED Bay-Delta Authorization Act (Public Law 108-361) and/or Water Infrastructure Improvements for the Nation Act (Public Law 114-322) • Potential involvement in the Project's electrical facilities, including the hydropower generation component • Potentially lease power privilege over hydropower facilities • Potentially assign new legislative authority to acquire shares of the water managed by the Authority

Jurisdiction	Responsibility
United States Department of the Interior, USFWS	• Issue a biological opinion to Reclamation in accordance with Endangered Species Act Section 7 consultation and incidental take authorization • Determine compliance with the following legislation: – Fish and Wildlife Coordination Act – Bald and Golden Eagle Protection Act – Migratory Bird Treaty Act – Wild and Scenic Rivers Act
United States Department of the Interior, Bureau of Indian Affairs	• Responsible for coordination with federally recognized tribes and protection of Indian Trust Assets • Coordinate compliance with – National Historic Preservation Act of 1966, Sections 106 and 110 – American Indian Religious Freedom Act – Native American Graves Protection and Repatriation Act – Executive Order 13007 (protection of Indian Sacred Sites on federal land)
Federal Energy Regulatory Commission (FERC)	• Potentially provide a license for the Project hydropower component
National Oceanic and Atmospheric Administration, NMFS	• Issue a biological opinion to Reclamation in accordance with Endangered Species Act Section 7 consultation and incidental take authorization • Determine compliance with the following legislation: – Fish and Wildlife Coordination Act – Magnuson-Stevens Fishery Conservation and Management Act
United States Department of Agriculture, Natural Resources Conservation Service	• Determine compliance with the Farmland Protection Policy Act
USACE	• Issue permits and approvals related to the following legislation and Executive Order: – Rivers and Harbors Act Section 9 (construction of dikes), Section 10 (alteration of navigable waters), and Section 408 (levee modification) – Clean Water Act Section 404 (discharge of dredge or fill material) permitting and associated Section 401 water quality certification – Emergency Flood Control Fund Act of 1955 – Executive Order 11988 (floodplain management) – Executive Order 11990 (protection of wetlands)
United States Department of Justice, Civil Rights Division	• Americans with Disabilities Act compliance

Jurisdiction	Responsibility
United States Environmental Protection Agency (USEPA)	• Provide compliance with the following legislation including necessary noticing (and through agreements with the State of California to implement requirements through CalEPA associated with air quality): – Clean Water Act in coordination with USACE – SPCCP developed in accordance with 40 CFR 112 – Clean Air Act and State Implementation Plan, including the NAAQS, as well as Section 309 related to evaluation of draft EIS adequacy – Safe Drinking Water Act
United States Department of Energy, Western Area Power Administration	• WAPA may market and deliver power generated by potential hydroelectric facilities • The Project may interconnect to the WAPA transmission system
State Agency Permits, Approvals, and Authorizations	
California Air Resources Board	• Administer the air quality policy to achieve the California Ambient Air Quality Standards (including the NAAQS for USEPA) and State Air Quality Designations
California Department of Boating and Waterways	• California Harbors and Navigation Code compliance
California Department of Conservation	• Designate Important Farmland in the State under the Farmland Mapping and Monitoring Program
California Department of Fish and Wildlife	• Lake and Streambed Alteration Agreement permitting (pursuant to Section 1602 of the California Fish and Game Code) • Compliance with Fish and Game Code related to fully protected species, birds of prey, native plant protection, invasive species, sufficient fisheries flows below dams, fish screening, and asphalt removal • California Endangered Species Act consultation and incidental take authorization (Section 2081) • California Native Plant Protection Act • Salmon, Steelhead Trout, and Anadromous Fisheries Program Act • Marine Invasive Species Act
California Department of Toxic Substances Control	• Compliance with generation, transportation, treatment, storage, and disposal of hazardous waste regulations
California Department of Transportation	• Issuance of an encroachment and transportation permits within the State Highway system and in coordination with the Federal Highway Administration for federal highways • Approval of transportation management plans
California DWR	• Prepare the California Water Plan Update to identify water resources issues and plans to minimize the issues • Responsible for SWP operations, including modifications of those operations related to storage, conveyance, or delivery of CVP water supplies • Work with Central Valley Flood Protection Board and USACE to implement floodplain regulations
California Energy Commission	• Implement State energy policies
California Independent System Operator	• Manage the flow of electricity across high-voltage, long-distance power transmission lines in most of California

Jurisdiction	Responsibility
California Office of Historic Preservation	• Coordinate with implementation of the California Register of Historical Resources under CEQA • Coordinate with federal agencies implementation of National Historic Preservation Act Section 106 consultation
California Public Utilities Commission	• Potentially permit to construct for power lines and other necessary electrical facility upgrades • Potentially approve power purchase agreement
California State Lands Commission	• Issue leases for work in areas under CSLC jurisdiction (e.g., along Sacramento River)
California State Water Resources Control Board	• Issue water rights • Administer Clean Water Act for USEPA in coordination with CVRWQCB
California Water Commission	• Responsible for quantification of public benefits of water storage projects • Potentially approve funding of the Project pursuant to Proposition 1
Central Valley Regional Water Quality Control Board	• Clean Water Act Section 401 certification Clean Water Act Section 402 NPDES permitting (including requirements for construction SWPPP)
Central Valley Flood Protection Board	• Responsible for controlling flooding along the Sacramento and San Joaquin rivers and their tributaries in cooperation with USACE • Maintain the integrity of existing flood control system and designated floodways through it regulatory authority by issuing permits for encroachments
Delta Stewardship Council	• Delta Plan consistency for covered actions that occur in whole or in part in the statutory Delta and/or Suisun Marsh, including some water transfers through the Delta
Native American Heritage Commission	• Identify sacred sites and Most Likely Descendants for Native American burials and provision of Native American contact information
Regional and Local Agency Permits, Approvals, and Authorizations	
Colusa, Glenn, and Tehama Counties	
Planning Departments	• Issuance of Conditional Use Permit • Rezoning of parcels in both counties • Conformance with State SMARA permitting or exemption if borrow is required from borrow site(s) not previously permitted under SMARA • Conformance with CEQA environmental review requirements
Engineering and Surveying Services Departments	• Plan approval for any county road or bridge crossings at creeks or grading for structures within 50 feet from the top of creek banks; grading and drainage plan; and grading permit • Erosion control plan development and permitting • Building and electrical permitting • Development of blasting plan for foundation and roadway installation
Environmental Health Services Departments	• Septic and water system permitting, including well installations

Jurisdiction	Responsibility
Roads Departments	• Encroachment permitting • Construction traffic control plan development for county roads • Assessment of fees for increases in peak-hour trips, if required • Heavy haul permitting • Roadway damage and repair bonds
Fire Departments	• Annual permitting for the use and storage of hazardous and flammable materials/wastes • Hazardous materials business plan development • Fire protection plan development
Colusa County APCD and Glenn County APCD	• Administer local air quality plans and coordinate with the California Air Resources Board
Project Participants That Would Be Potential CEQA Responsible Agencies	
Glenn-Colusa Irrigation District	• Possible actions related to the Sites Reservoir alternatives
Colusa County Water District	• Possible actions related to the Sites Reservoir alternatives
Westside Water District	• Possible actions related to the Sites Reservoir alternatives
Maxwell Irrigation District	• Possible actions related to the Sites Reservoir alternatives
Western Canal Water District	• Possible actions related to the Sites Reservoir alternatives
Carter Mutual Water Company	
Garden Highway Mutual Water Company	
Orland Artois Water District	• Possible actions related to the Sites Reservoir alternatives
Placer County Water Agency and City of Roseville	• Possible actions related to the Sites Reservoir alternatives
Tehama-Colusa Canal Authority	• Possible actions related to the Sites Reservoir alternatives
Reclamation District 108	• Possible actions related to the Sites Reservoir alternatives
Colusa County	• Possible actions related to the Sites Reservoir alternatives
Glenn County	• Possible actions related to the Sites Reservoir alternatives
Davis Water District	• Possible actions related to the Sites Reservoir alternatives
Dunnigan Water District	• Possible actions related to the Sites Reservoir alternatives
Cortina Water District	• Possible actions related to the Sites Reservoir alternatives
LaGrande Water District	• Possible actions related to the Sites Reservoir alternatives
Proberta Water District	• Possible actions related to the Sites Reservoir alternatives
City of American Canyon	• Possible actions related to the Sites Reservoir alternatives
4M Water District (TC-6)	• Possible actions related to the Sites Reservoir alternatives
California Water Service	• Possible actions related to the Sites Reservoir alternatives
Antelope Valley-East Kern Water	• Possible actions related to the Sites Reservoir alternatives
Castaic Lake Water Agency	• Possible actions related to the Sites Reservoir alternatives
Coachella Valley Water District	• Possible actions related to the Sites Reservoir alternatives
Desert Water Agency	• Possible actions related to the Sites Reservoir alternatives
Metropolitan Water District of Southern California	• Possible actions related to the Sites Reservoir alternatives
Pacific Resources Mutual Water Company	• Possible actions related to the Sites Reservoir alternatives
San Bernardino Valley Municipal Water District	• Possible actions related to the Sites Reservoir alternatives
Santa Clara Valley Water District	• Possible actions related to the Sites Reservoir alternatives

Jurisdiction	Responsibility
San Gorgonio Pass Water Agency	• Possible actions related to the Sites Reservoir alternatives
Wheeler Ridge-Maricopa Water Storage District	• Possible actions related to the Sites Reservoir alternatives
Alameda County, Zone 7	• Possible actions related to the Sites Reservoir alternatives

Notes:

APCD = Air Pollution Control District
CalEPA = California Environmental Protection Agency
CSLC = California State Lands Commission
CVRWQCB = Central Valley Regional Water Quality Control Board
FERC = Federal Energy Regulatory Commission
NAAQS = National Ambient Air Quality Standard
NPDES = National Pollutant Discharge Elimination System
SMARA = Surface Mining and Reclamation Act
SPCCP = spill prevention control and countermeasure plan
SWPPP = stormwater pollution prevention plan
USEPA = U.S. Environmental Protection Agency

This EIR/EIS, when finalized, is intended to be used by the Authority and Reclamation when they consider approval of the Project. All cooperating agencies and other federal, state, and local agencies with permitting or approval authority over any aspect of the Project are expected to use the information contained in the Final EIR/EIS to meet most, if not all, of their information needs to make decisions or issue permits (see further details in Chapter 4 Environmental Compliance and Permit Summary of this Draft EIR/EIS).

1.8 Study Areas

The Project is intended to enhance California's water supply system with respect to increased water supply reliability, including water conditions in the Delta and water deliveries, to support SWP and CVP system operations and water deliveries over a large geographic area. To evaluate the full range of effects from the Project on the environmental resources in different geographic areas, the Authority and Reclamation have identified three study areas for analysis:

- Extended Study Area – Includes the geographic areas that use water provided by CVP and SWP
- Secondary Study Area – Includes the geographic areas that are directly or indirectly affected by operations of CVP and SWP facilities located north of the Delta
- Primary Study Area – Includes the geographic areas that are directly affected by construction and/or operations of the Project facilities under Alternatives A, B, C, C_1, or D

These three study areas are described in more detail in the following subsections, and are shown on Figure 1-3.

1.8.1 Extended Study Area

The Extended Study Area, consisting of the SWP and CVP service areas, is the largest and most diverse of the three study areas in terms of size, geography, land use, and habitat conditions. It is anticipated to experience minor effects with respect to changed operations and conditions, given no construction will occur in this area. As described in the various resource area chapters, impacts in this area would be limited to generally minor reservoir level fluctuations and changes in releases across the CVP and SWP

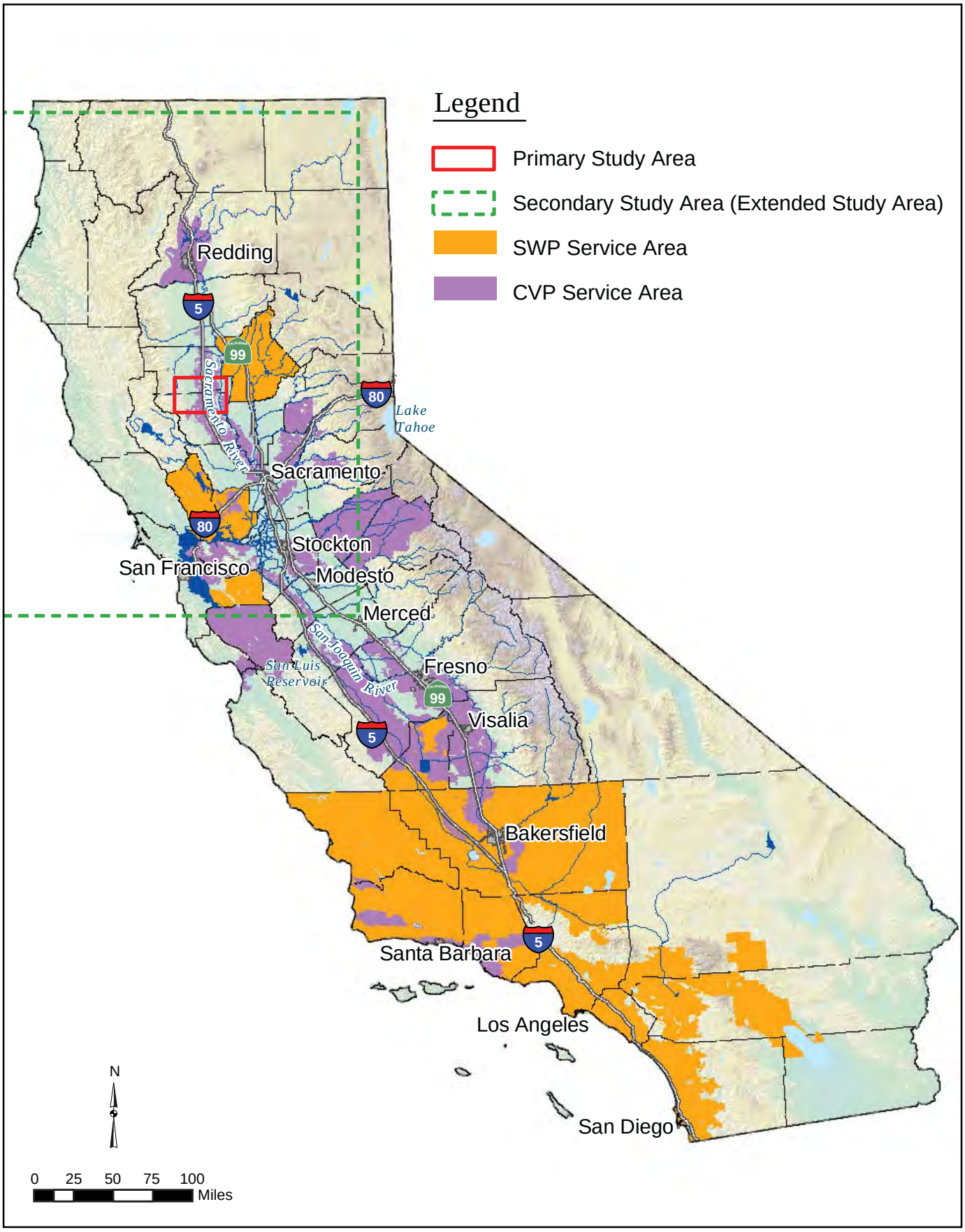


FIGURE 1-3
Primary, Secondary, and Extended Study Areas
Sites Reservoir Project EIR/EIS

system. As such, it has been described and evaluated in the resource chapters of this document (Chapters 6 through 31) at the lowest levels of detail. Changes in conditions at the CVP and SWP facilities located south of the Delta (including the San Luis Reservoir) are considered within the Extended Study Area. Changes within the CVP and SWP service areas, resulting only from changes in CVP and/or SWP water deliveries, are considered within the Extended Study Area.

The Extended Study Area includes the entire service areas of the SWP and CVP. These two service areas are located within all, or portions of, the following 33 counties: Alameda, Butte, Colusa, Contra Costa, El Dorado, Fresno, Glenn, Kern, Kings, Los Angeles, Madera, Merced, Napa, Orange, Placer, Plumas, Riverside, Sacramento, San Benito, San Bernardino, San Diego, San Joaquin, San Luis Obispo, Santa Barbara, Santa Clara, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Ventura, and Yolo. The Project's purpose of improved water supply reliability has the potential for long-term direct and indirect effects within these two service areas. The Extended Study Area would also includes wildlife refuges that could receive Levels 2 and 4 water supply from the Project.[1] Those wildlife refuges, which are located within seven counties in the Extended Study Area, are shown on Figure 1-4.

1.8.2 Secondary Study Area

The Secondary Study Area is smaller than the Extended Study Area and consists of the majority of SWP and CVP facilities that could be affected by potential operations associated with certain Project alternatives; this study area has been described and evaluated in the resource chapters in more detail than for the Extended Study Area. The Secondary Study Area consists of the geographical area with SWP and CVP facilities located north of the Delta and in the Delta, and the streams downstream of the SWP and CVP reservoirs that could experience water surface elevation fluctuations or stream flow changes. Those facilities are located within the following 18 counties: Alameda, Butte, Colusa, Contra Costa, Del Norte, El Dorado, Glenn, Humboldt, Placer, Sacramento, Santa Clara, Shasta, Solano, Sutter, Tehama, Trinity, Yolo, and Yuba.

The potential was evaluated for operational changes that could (or not) occur as a result of the coordinated and integrated operation of the Project's facilities with the CVP or SWP facilities located on the Trinity River, Clear Creek, Spring Creek, Sacramento River, Sutter Bypass, Yolo Bypass, Feather River, American River, and the Delta. The Secondary Study Area also includes the existing TCCA Red Bluff Pumping Plant in Tehama County given the distance of this existing facility from the majority of Project features in the Primary Study Area described below. Project activities in this area would be limited to minor construction and installation of equipment within existing facilities.

The Secondary Study Area includes the upper reaches of the Trinity and Sacramento[2] river watersheds, given their use by migrating salmonids, as well as the Pacific Ocean along the California coast, from the confluence with the San Francisco Bay to the area north of the confluence with the Klamath River; this area supports the Southern Resident Distinct Population Segment of killer whale (*Orcinus orca*). This killer whale, listed as an endangered species by NMFS, relies on the salmonid population as major portion of their foodweb support. Potential operational changes in the CVP, SWP, and Project facilities

[1] The Central Valley Project Improvement Act (CVPIA) established firm water supplies for specific National Wildlife Refuges and State Wildlife Areas as Level 2 water supplies. Level 2 water supplies were defined as the average amount of water obtained from non-firm water supplies in the late 1980s. Level 4 water supplies were defined as the amount of water needed for each refuge to support its habitat throughout the refuge. This is detailed further in Chapter 6 Surface Water Resources.

[2] While the Sacramento River is in the Secondary Study Area, direct impacts would occur in the river as part of the construction and operation of the Delevan Pipeline Intake/Discharge Facilities.

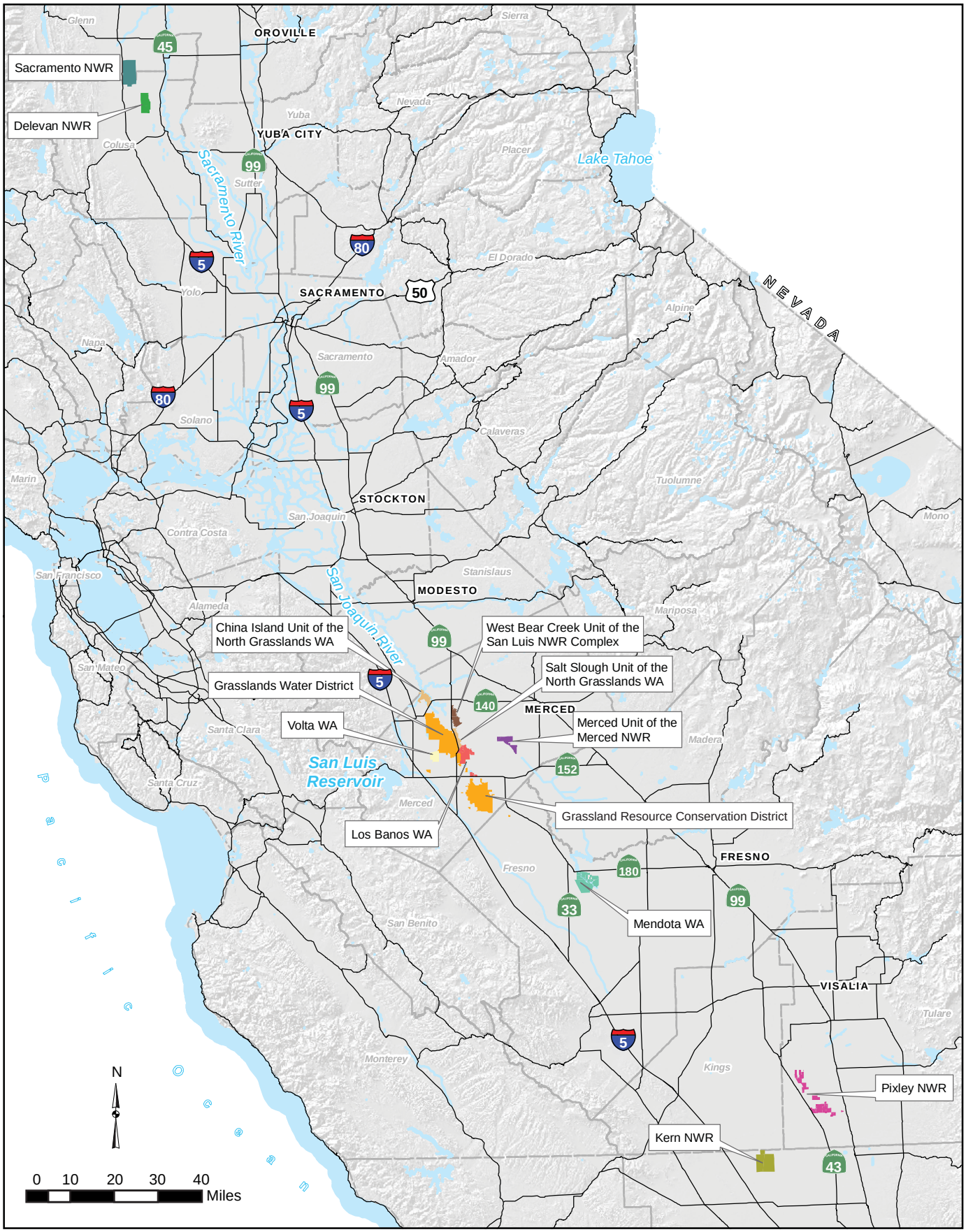


FIGURE 1-4
Level 4 Wildlife Refuges in the Extended Study Area
Sites Reservoir Project EIR/EIS

included in certain alternatives have the potential to affect salmonid populations in the Sacramento River watershed and the Delta. The Secondary Study Area does not include the geographical area in the San Joaquin River watershed upstream of Vernalis on the San Joaquin River because potential operations included in Alternatives A, B, C, C_1, and D assume that no changes would occur in the operations of the reservoirs on the San Joaquin River, including CVP Millerton Lake or New Melones reservoir. Therefore, there would be no appreciable changes in conditions at these reservoirs (including CVP facilities) or the downstream reaches of associated streams. The Secondary Study Area is shown on Figure 1-5.

1.8.3 Primary Study Area

The Primary Study Area consists of the geographical areas that could be directly affected by the construction and operations of the Project facilities and the land immediately surrounding them, which would be included in the Project boundary (referred to in this document as the "Project Buffer"); as such, this study area is the primary focus of the resource evaluations in this Draft EIR/EIS. The Primary Study Area includes the "footprints" of the Sites Reservoir facilities (including, dams, intakes/discharge facilities, fish screens, pipelines, overhead power line, pumping/generating plants, recreation areas, road relocation areas, borrow areas, and associated facilities) other than the Tehama-Colusa and GCID Main Canal diversion facilities. The Primary Study Area is located within Glenn and Colusa counties.

The Authority and Reclamation have developed five action alternatives (Alternatives A, B, C, C_1, and D, which are described in Chapter 2 Alternatives Analysis) for detailed evaluation. There are differences in the facilities associated with the five alternatives; therefore, the Primary Study Areas for the five alternatives also differ. The Primary Study Areas associated with Alternatives A, B, C, C_1, and D are shown on Figures 1-6A, 1-6B, 1-6C, 1-6C_1, and 1-6D, respectively. Detailed descriptions of each Project facility are provided in Chapter 3 Description of the Sites Reservoir Project Alternatives.

1.9 Areas of Controversy/Issues to be Resolved

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

- **Impacts on Project Area Property Owners:** Project development would require the demolition of existing structures, acquisition of private property, and relocation of displaced parties. These actions concern property owners within the Primary Study Area.
- **Impacts on Aquatic Biological Resources:** Project operations would change the flow patterns and the amounts of unregulated water in the Sacramento River. These changes and the uncertainty of future regulatory constraints on regulated and unregulated flows in the Sacramento River are a concern within the Secondary Study area.
- **Impacts on Tribal Resources:** Project development would impact burials, and potentially other sensitive tribal resources, and could be viewed by some as controversial.
- **Impacts on Terrestrial Biological Resources:** Golden eagles have been identified as foraging within the Sites Reservoir Inundation Area and nesting within the recreation areas. USFWS has expressed concern about the potential loss of nesting and foraging habitat for golden eagles, which are protected by the Bald and Golden Eagle Protection Act.

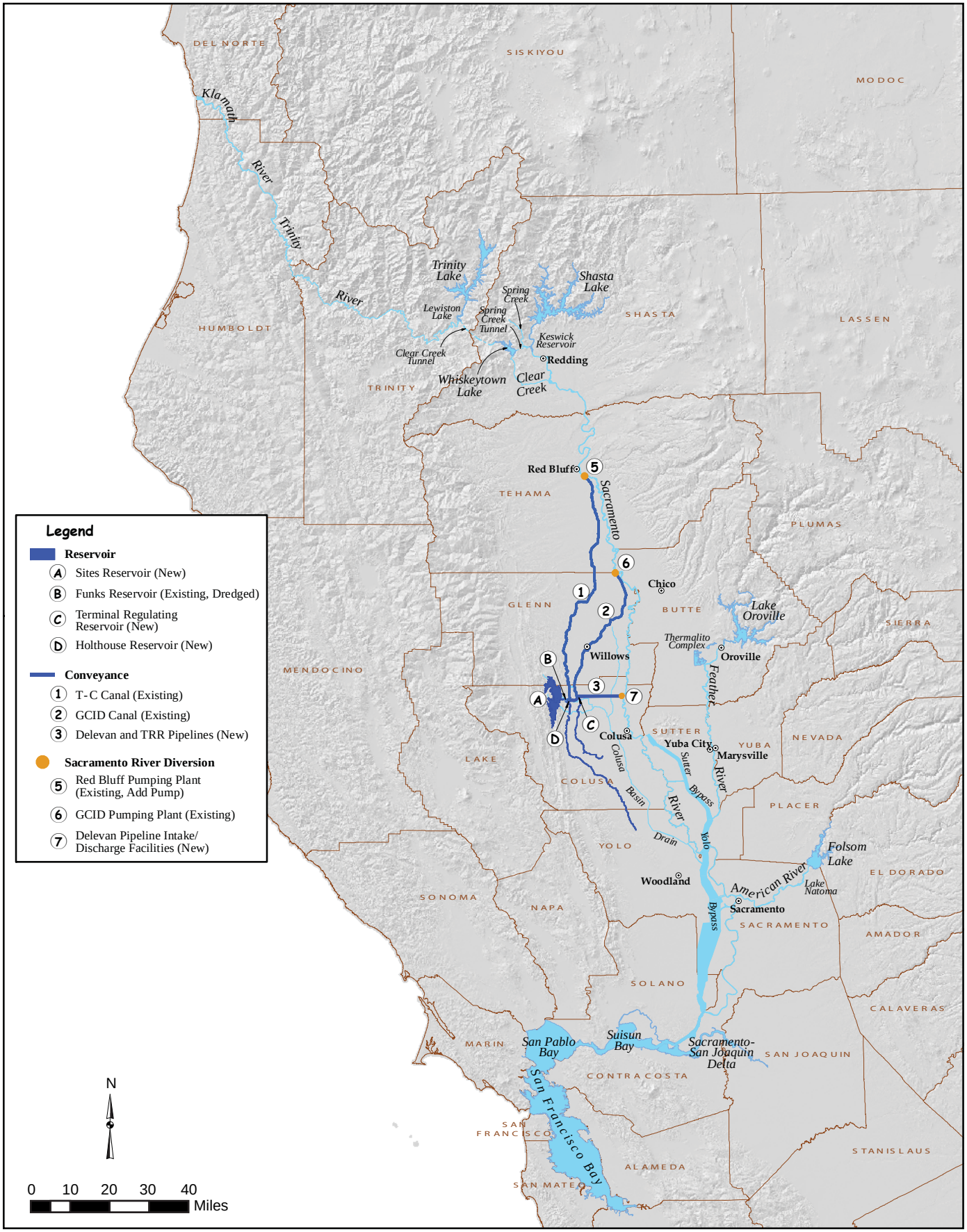


FIGURE 1-5
Secondary Study Area
Sites Reservoir Project EIR/EIS

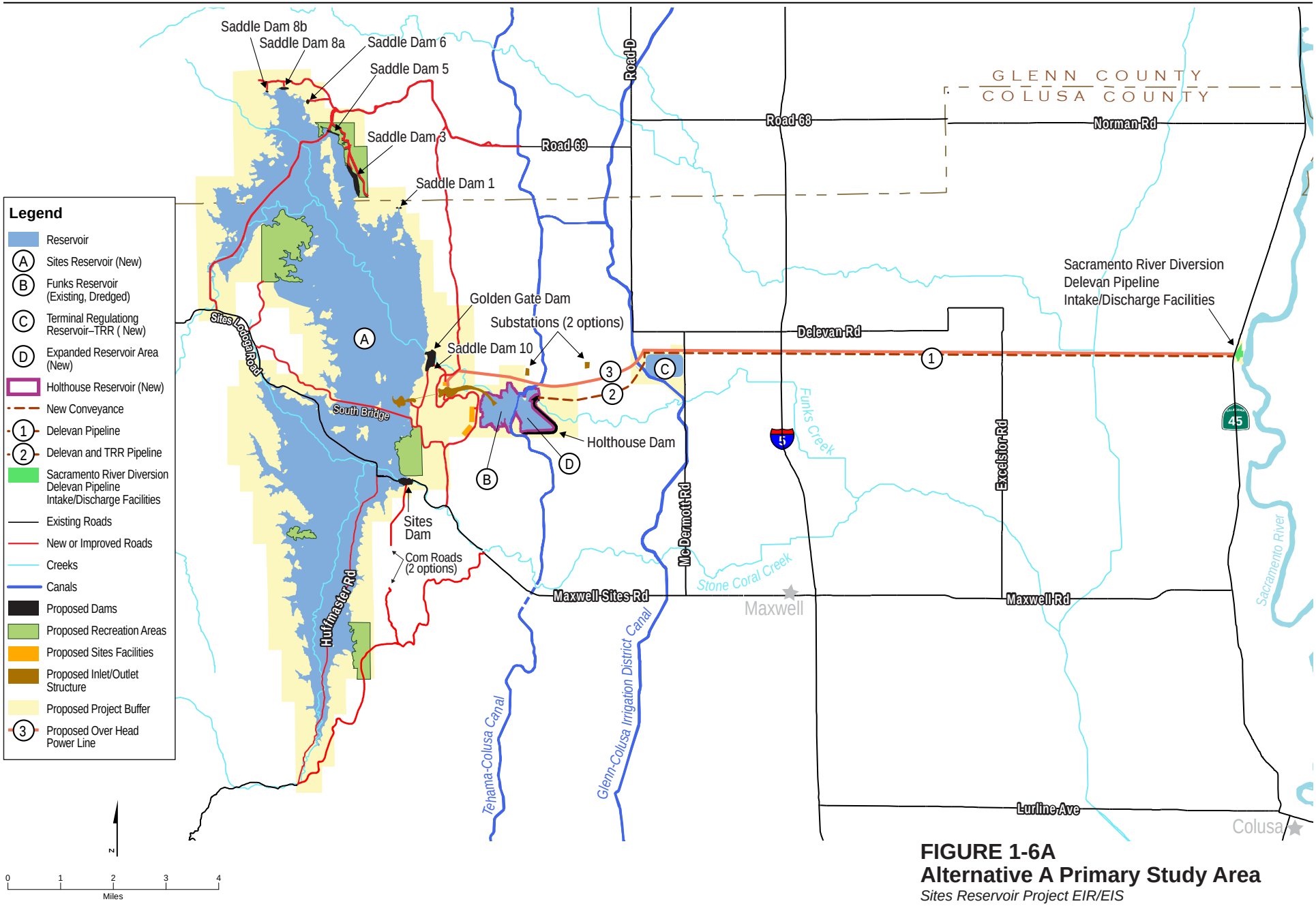


FIGURE 1-6A
Alternative A Primary Study Area
Sites Reservoir Project EIR/EIS

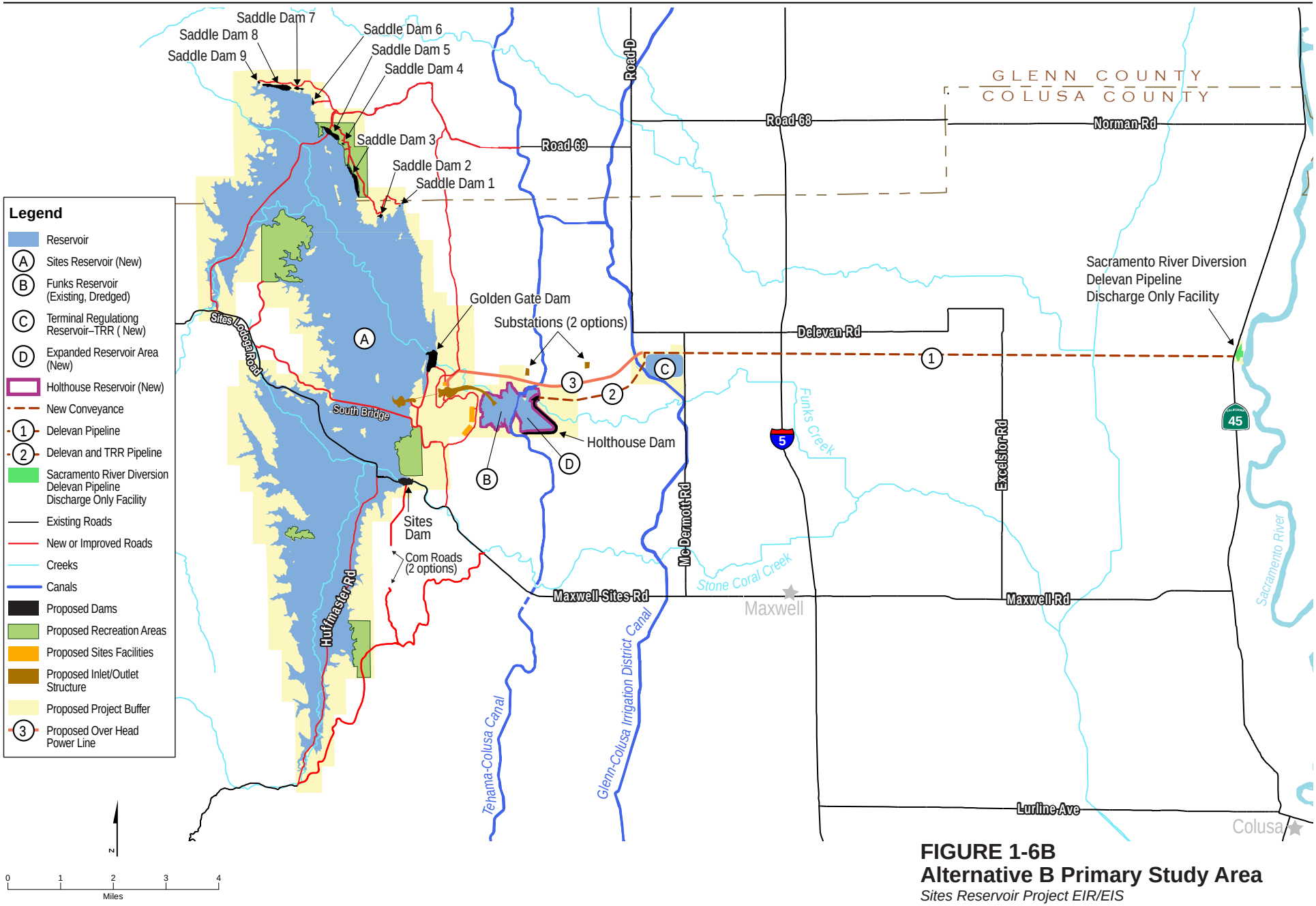


FIGURE 1-6B
Alternative B Primary Study Area
Sites Reservoir Project EIR/EIS

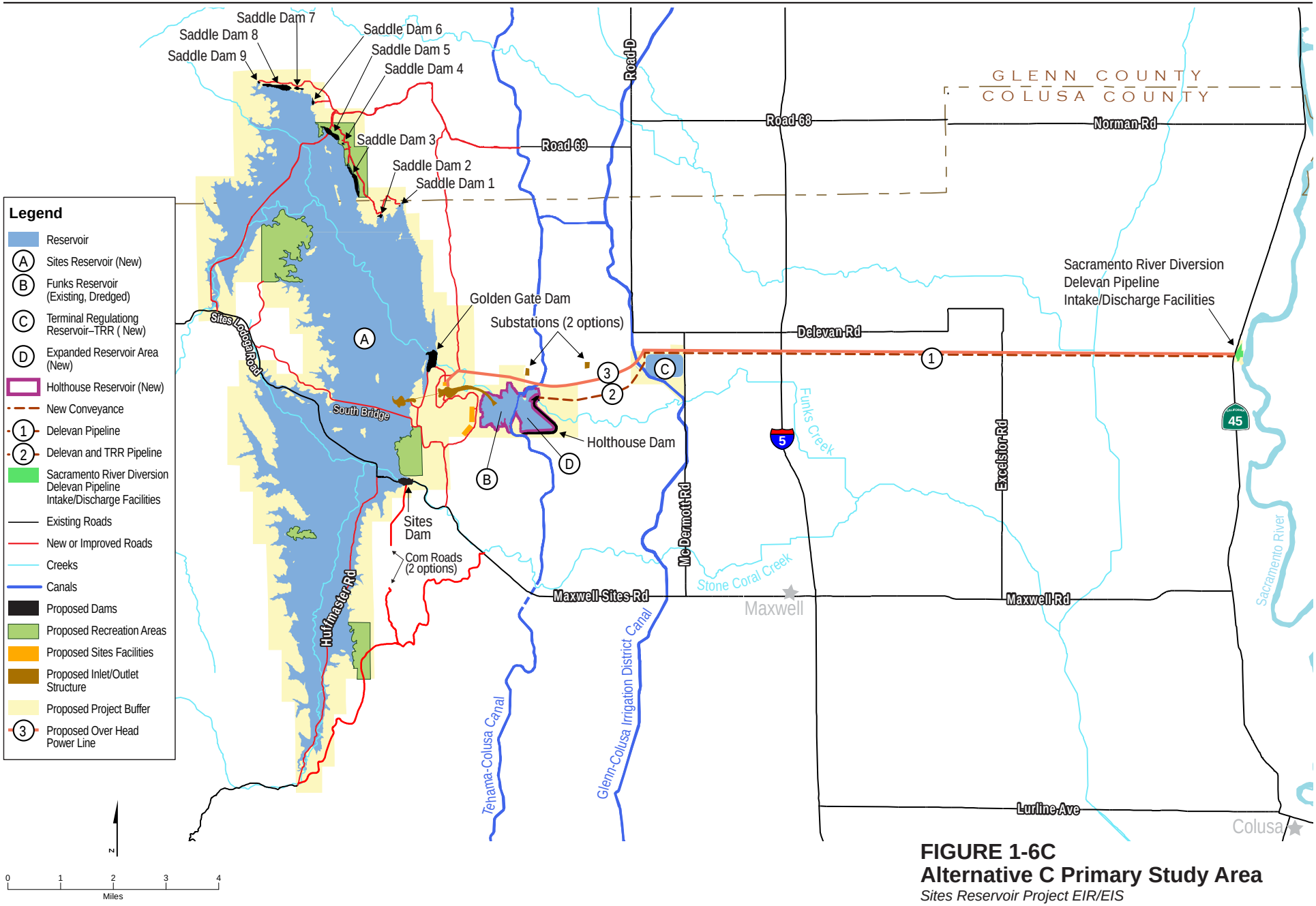


FIGURE 1-6C
Alternative C Primary Study Area
Sites Reservoir Project EIR/EIS

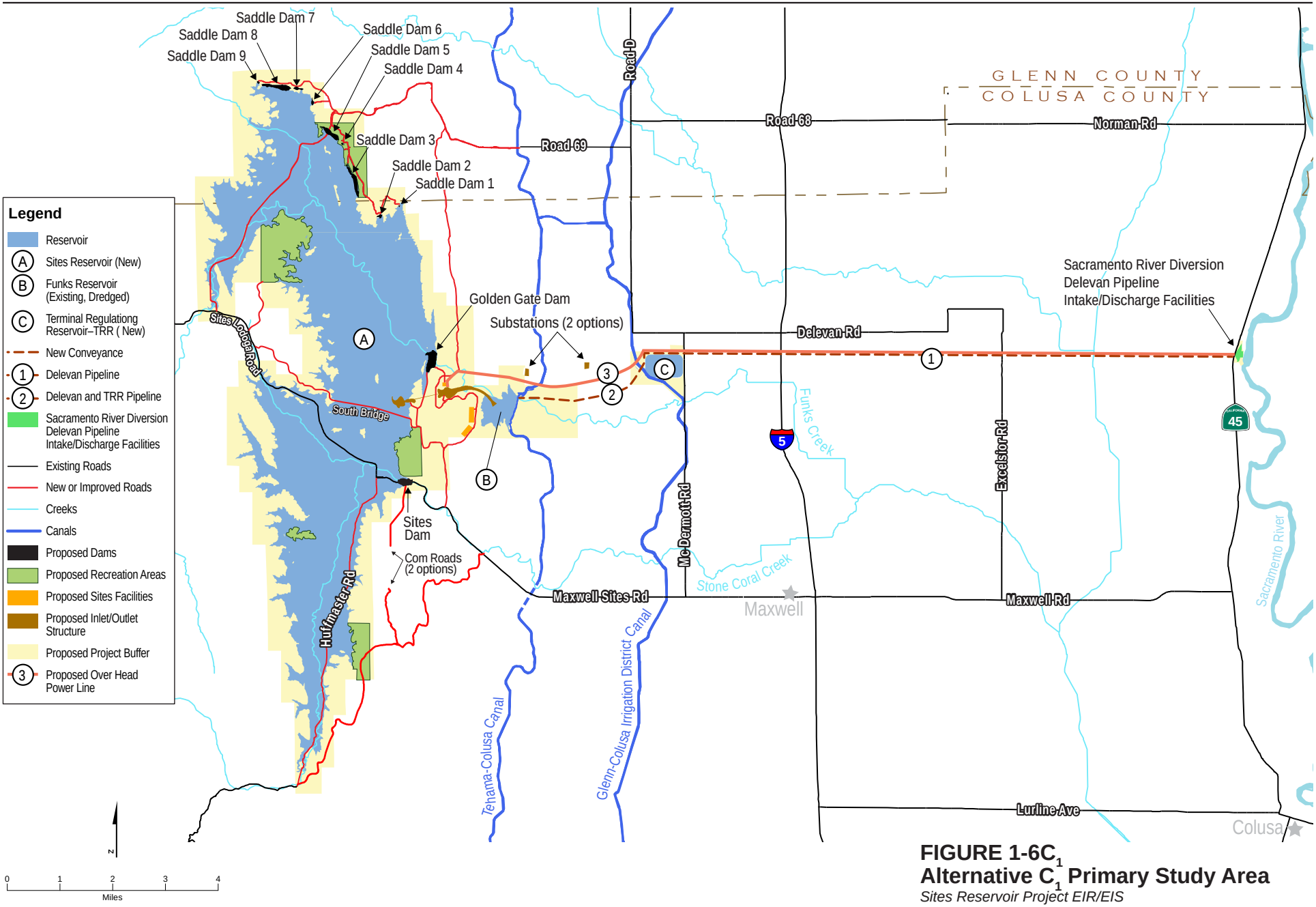
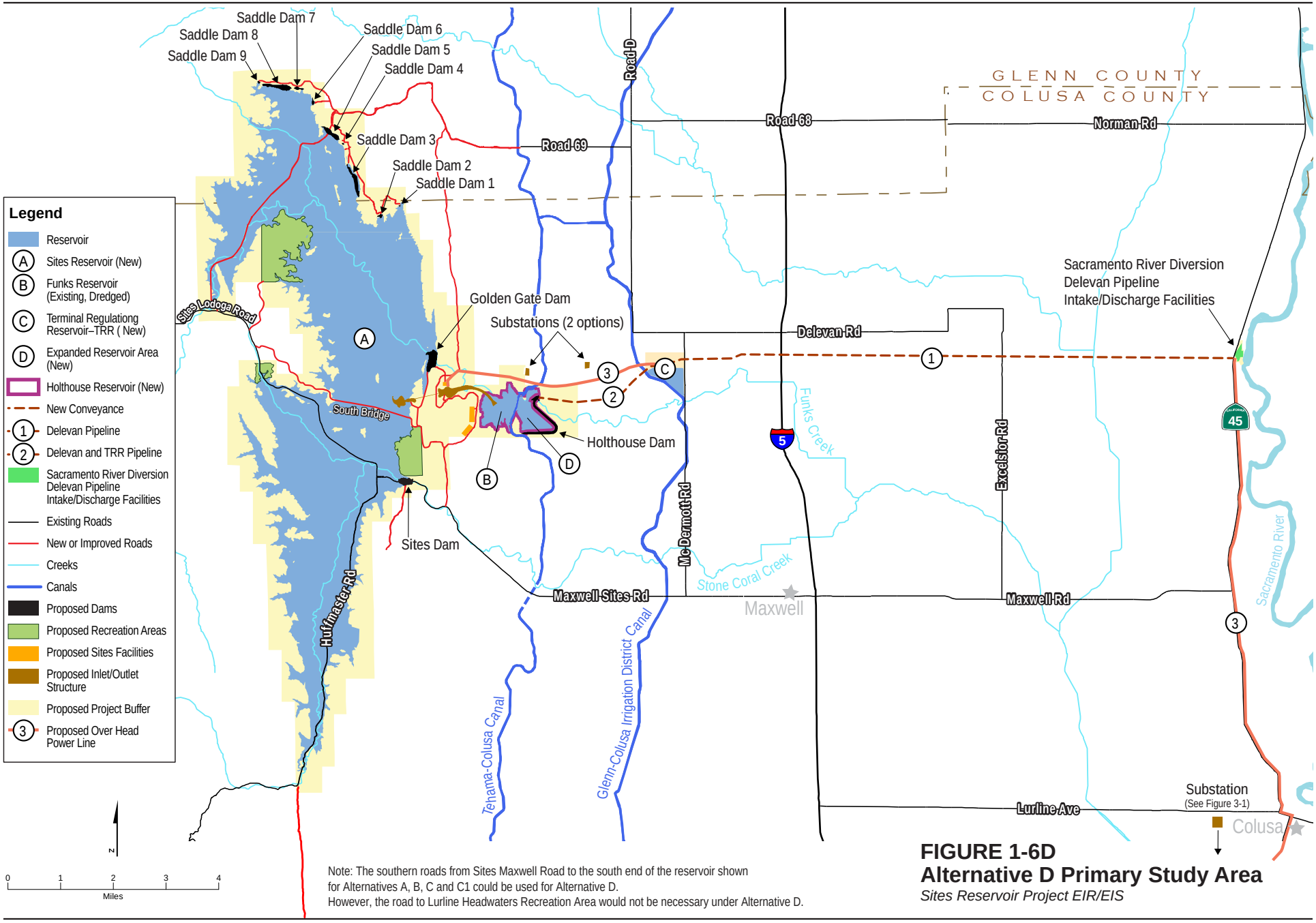


FIGURE 1-6C$_1$
Alternative C$_1$ Primary Study Area
Sites Reservoir Project EIR/EIS



Note: The southern roads from Sites Maxwell Road to the south end of the reservoir shown for Alternatives A, B, C and C1 could be used for Alternative D.
However, the road to Lurline Headwaters Recreation Area would not be necessary under Alternative D.

FIGURE 1-6D
Alternative D Primary Study Area
Sites Reservoir Project EIR/EIS

1.10 Public Involvement

As part of the supplemental CEQA scoping process following the Authority's issuance of the Supplemental NOP on February 2, 2017, the Authority held two public meetings, on February 15, 2017, in Sacramento, California, and on February 16, 2017, in Maxwell, California. The purposes of these meetings were to receive input and comments on the scope and contents of the environmental analysis in the Draft EIR/EIS. A summary of comments received during the supplemental CEQA process are included in Appendix 36A Supplemental Scoping Report to the Draft EIR/EIS. Outreach activities also have included regular coordination with and input from public agencies, including DWR and other resource agencies. This EIR/EIS accounts for and addresses comments received during the supplemental scoping period of February 2 through March 2, 2017, including public meetings held during this timeframe.

In accordance with CEQA and NEPA review requirements, this Draft EIR/EIS will be circulated for public and agency review and comment for a 90-day period following the date when the USEPA publishes the Notice of Availability of Weekly Receipt of Environmental Impact Statements in the *Federal Register*, and the filing of the Notice of Completion with the California State Clearinghouse. Public hearings have been scheduled for the following dates and locations so that the Authority and Reclamation can receive comments on the Draft EIR/EIS: September 26, 2017, in Maxwell, California, and September 28, 2017, in Sacramento, California. Further, notices will be published that indicate the availability of the Draft EIR/EIS for public review and comment. During the review and comment period, oral and written communication on the Draft EIR/EIS may be submitted to:

Sites Project Authority
Mr. Rob Thomson
P.O. Box 517
Maxwell, CA 95955
EIR-EIS-Comments@SitesProject.org

Reclamation
Mr. Michael Dietl
916-978-5070
EIR-EIS-Comments@SitesProject.org

Comments received on the Draft EIR/EIS will be addressed in the Final EIR/EIS. A Final EIR/EIS that will include responses to all comments will be prepared and circulated in accordance with NEPA and CEQA requirements. The Final EIR/EIS will be circulated for 30 days prior to approval of the Project.

1.11 Organization of the Draft EIR/EIS

This Draft EIR/EIS includes the following chapters:

- **Executive Summary:** This chapter provides a summary of the Project description, a description of issues to be resolved and areas of controversy, the significant environmental impacts that would result from implementation of the alternatives, and mitigation proposed to reduce or eliminate those impacts.
- **Chapter 1 Introduction:** This chapter describes the purpose, need, objectives, authorization, location of the alternatives being evaluated, and the three study areas; provides an overview of the environmental review process and background for the Project; summarizes the intended use of the EIR/EIS; and lists the areas of controversy and issues to be resolved.
- **Chapter 2 Alternatives Analysis:** This chapter describes the approach used to develop the action alternatives that are evaluated in this Draft EIR/EIS, including a discussion of the evaluation of

alternative reservoir locations, reservoir sizes, and conveyance alternatives. It also describes Existing Conditions/No Project/No Action Condition.

- **Chapter 3 Description of the Sites Reservoir Project Alternatives:** This chapter describes in detail the Project facilities included in the action alternatives (Alternatives A, B, C, C_1, and D), and describes Project operation for each of the action alternatives.
- **Chapter 4 Environmental Compliance and Permit Summary:** This chapter presents the regulatory framework for the resources chapters (Chapters 6 through 31).
- **Chapter 5 Guide to Resources Analysis:** This chapter describes the process used to develop the environmental setting (that is, affected environment) and evaluate the environmental impacts (that is, environmental consequences) of implementing the alternatives; defines types of impacts and levels of significance; describes mitigation measure development and eliminated topics; and summarizes the modeling tools and analytical methods that were used for each resource analysis.
- **Chapters 6 through 31 Resource Chapter Evaluations:** These chapters include descriptions of the environmental setting (that is, affected environment), contain assessments of the potential impacts of each of five alternatives within each of three study areas, and list mitigation measures for identified potentially significant impacts, where appropriate, for the following resources:
  - Surface Water Resources
  - Surface Water Quality
  - Fluvial Geomorphology and Riparian Habitat
  - Flood Control and Management
  - Groundwater Resources
  - Groundwater Quality
  - Aquatic Biological Resources
  - Botanical Resources
  - Terrestrial Biological Resources
  - Wetlands and Other Waters
  - Geology, Minerals, Soils, and Paleontology
  - Faults and Seismicity
  - Cultural/Tribal Cultural Resources
  - Indian Trust Assets
  - Land Use
  - Recreation Resources
  - Socioeconomics
  - Environmental Justice
  - Air Quality
  - Climate Change and Greenhouse Gas Emissions
  - Navigation, Transportation, and Traffic
  - Noise
  - Public Health and Environmental Hazards
  - Public Services and Utilities
  - Visual Resources
  - Power Production and Energy

- **Chapter 32 Short-term Uses vs. Long-term Productivity:** This chapter describes the short-term uses vs. long-term productivity of the Project.
- **Chapter 33 Irreversible or Irretrievable Commitments of Resources**: This chapter describes the irreversible or irretrievable commitments of resources associated with the Project.
- **Chapter 34 Growth-inducing Impacts**: This chapter describes the growth-inducing impacts associated with the Project.
- **Chapter 35 Cumulative Impacts**: This chapter describes the cumulative impacts of the Project.
- **Chapter 36 Consultation and Coordination:** This chapter describes the public scoping process and the agencies and organizations that have been consulted throughout the process of the Sites Reservoir/NODOS Investigation.
- **Chapter 37 References:** This chapter lists the sources of information used to prepare the Draft EIR/EIS. All references are listed by the chapter in which they were cited.
- **Chapter 38 List of Preparers and Contributors:** This chapter lists the individuals who participated in the preparation of this Draft EIR/EIS, and provides the qualifications for those individuals, in order of organization and agency.
- **Chapter 39 EIR/EIS Document Distribution:** This chapter describes the circulation/distribution of this Draft EIR/EIS for public review.
- **Appendixes:** The appendixes are located at the back of this Draft EIR/EIS and are listed in the table of contents.

1.12 Preparers of the Draft EIR/EIS

This Draft EIR/EIS has been prepared by a multidisciplinary team at the direction of the two lead agencies: the Authority and Reclamation. Additionally, the lead agencies have actively solicited input and review from responsible agencies and cooperating agencies, including DWR, CDFW, SWRCB, CVRWQCB, Colusa Indian Community Council, Cortina Indian Rancheria, USFWS, NMFS, Western Area Power Administration, USACE, and Bureau of Indian Affairs, described in Chapter 36 Consultation and Coordination. Throughout the Draft EIR/EIS preparation process, input has been solicited and considered from affected parties and agencies, including local governments, interest groups, and individuals. Chapter 38 List of Preparers and Contributors provides a comprehensive list of the individuals involved in the preparation of the Draft EIR/EIS, and Chapter 39 EIR/EIS Document Distribution provides a list of parties that requested to be involved in the Project in some manner.

This page intentionally left blank.