30. Visual Resources

30.1 Introduction

This chapter describes the visual resources setting for the Extended, Secondary, and Primary study areas. Descriptions and maps of these three study areas are provided in Chapter 1 Introduction. Visual resources include the natural and artificial landscape features that contribute to perceived visual images and the aesthetic value of a view.

Permits and authorizations for visual resources are presented in Chapter 4 Environmental Compliance and Permit Summary. The regulatory setting for visual resources is presented in Appendix 4A Environmental Compliance.

This chapter focuses primarily on the Primary Study Area. Potential impacts in the Extended and Secondary study areas were evaluated and discussed qualitatively. Potential local and regional impacts from constructing, operating, and maintaining the alternatives were described and compared to applicable significance thresholds. Mitigation measures are provided for identified potentially significant impacts, where appropriate.

30.2 Environmental Setting/Affected Environment

30.2.1 Methodology

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

Accordingly, existing conditions and the No Project/No Action alternatives are assumed to be the same for this EIR/EIS and as such are referred to as the Existing Conditions/No Project/No Action Condition, which is further discussed in Chapter 2 Alternatives Analysis. With respect to applicable reasonably foreseeable plans, projects, programs and policies that may be implemented in the future but that have not

yet been approved, these are included as part of the analysis of cumulative impacts in Chapter 35 Cumulative Impacts.

Visual resources consist of the natural and artificial features that create the perceived visual character and sensitivity of a landscape. Several factors are considered when characterizing the existing visual resources of the study areas to help determine the degree to which those resources or landscapes may be affected by the Sites Reservoir Project (Project). The principal existing visual factors considered in this analysis are defined below and include: Visual Quality, Viewer Types and Volumes, Viewer Exposure, and Visual Sensitivity.

Visual Quality is defined as the overall visual impression or attractiveness of an area as determined by the particular landscape characteristics, including landforms, rock forms, water features, and vegetation or land use patterns. The attributes of vividness (power or memorability of landscape components), intactness (integrity and freedom of landscape from encroaching elements), and unity (coherence and harmony of landscape as a whole) contribute to the overall visual quality of an area (Federal Highway Administration [FHWA], 1988).

For the purposes of this analysis, visual quality is defined according to three levels:

- **Low** – defined as visual resources that are indistinctive, and generally lacking in cohesiveness and natural or cultural visual resource amenities typical of the region
- **Moderate** – defined as visual resources typical or representative of the region's natural and/or cultural visual amenities
- **High** – defined as visual resources that are distinctive or exemplary of the region's natural or cultural scenic amenities

Viewer Types and Volumes of use pertain to the types (i.e., public viewers including recreationists and motorists) and amounts (i.e., number of recreationists or motorists) of use that various land uses receive. Land uses that derive value from the quality of their settings are considered potentially sensitive to changes in visual setting conditions. Land uses within the Project area that may be sensitive to change in visual conditions include designated scenic highways, designated scenic roads, and designated park, recreation and natural areas.

Viewer Exposure addresses the variables that affect viewing conditions from potentially sensitive areas. Viewer exposure considers the following factors:

- **Landscape visibility:** Whether the line of sight is open and panoramic to the Project facility sites or is restricted by terrain, vegetation, and/or structures.
- **Viewing distance:** The proximity of viewers to the Project. Viewing distances are described according to whether the Project activities would be viewed within the foreground (within 0.5 mile), middleground (0.5 to 2.0 miles), or background (beyond 2.0 miles) zone.
- **Viewing angle:** Whether the Project would be viewed from above (superior), below (inferior), or from a level (normal) line of sight. Viewing angle and extent of visibility considers the relative location of the Project facility to the viewer and whether visibility conditions are open, or are limited by intervening vegetation, terrain, or structures.
- **Number of viewers:** How many viewers would see the Project facilities.

- **Duration of view:** How long (days, hours, or minutes)] that viewers would see the Project facilities.

Visual Sensitivity is a combined measurement of the overall susceptibility of an area or viewer group to adverse visual or aesthetic impacts, given the combined factors of landscape visual quality, viewer types, and exposure conditions (FHWA, 1988). Visual sensitivity is reflected according to high, moderate, and low visual sensitivity ranges. The viewer groups for the Project can be classified as three types:

- **Residents:** Residents are considered to be a sensitive viewer group because of the Project's long-term presence and the sensitivity with which people typically regard their places of residence. Residents are also considered to have frequent opportunities to experience the views from their homes, and view duration can be lengthy. Residents in the vicinity of Project facilities have views of varying landscapes and quality.
- **Recreationists:** Recreationists are considered to be a sensitive viewer group because they generally value and are more aware of the aesthetic quality of their surroundings than commuters or people at work. Their focus is usually on their surroundings while they are engaging in recreational activities. Individual views can be of an extended duration, although they may be limited in frequency. In addition, the recreation activity they are engaging in is usually enhanced by their surroundings. Recreation areas in the vicinity of the Primary Study Area include East Park Reservoir, the Delevan National Wildlife Refuge (NWR), and the Sacramento River and shoreline near the proposed Delevan Pipeline Intake/Discharge Facilities. There are several State Recreation Areas and designated wildlife refuges within the Extended and Secondary study areas.
- **Motorists:** Motorists are considered to have lower sensitivity than residents and recreationists because views from the roadway are fleeting and short-term, are partially obstructed by the vehicle, and the drivers' attention is primarily concentrated on maneuvering the vehicle on the roadway. It is acknowledged that scenic driving for pleasure is a valid recreational activity and the sensitivity of such viewers has not been ignored in this analysis. However, because of the short view time, the distraction that would occur from the actual driving activity and the obstructed views within vehicles, these travelers (drivers and passengers) are not considered highly sensitive viewers. The viewshed from within vehicles sitting higher off the ground, such as commercial trucks, is greater than from passenger vehicles, but it is still of relatively short duration and can be partially obstructed by the vehicle itself. Portions of the Primary Study Area would be located within the viewshed of motorists on Interstate (I)-5, Old Highway 99W, State Route (SR) 45, Maxwell Sites Road, and several county roads.

30.2.2 Extended Study Area

The visual landscape for the Extended Study Area[1] is extremely varied; the area includes State and federal service areas providing water supply delivery to agricultural, industrial, and municipal water uses, and several wildlife refuges.

Availability, amount, and source of water supply for delivery by the CVP and SWP for the purpose of agricultural, industrial, and municipal water uses varies annually, and depends on several factors, including:

[1] The Extended Study Area is defined as the portions of the CVP and SWP service areas that could be affected by Project operations, located within 39 counties

- Natural seasonal variability in weather and precipitation
- Ongoing implementation of agency programs and management plans, which cause a change (reduction or increase) in exports, allocation, or peak diversion rates

Due to this variability, it is complex to characterize a stable baseline visual resources environmental setting, or link an individual action to a change in visual resources, for the service areas within the Extended Study Area. Land uses in these areas vary considerably, depending on the location and include agricultural, municipal and industrial, commercial, open space, grazing, and timber production. Of these uses, agriculture dominates the Extended Study Area, therefore, much of the visual resources in the Extended Study are associated with active agricultural land and the conveyance systems that provide water service throughout the State, as well as the rural residences and towns, and the auxiliary structures associated with agricultural practice.

The Extended Study Area includes San Luis Reservoir, which is located approximately 170 miles southeast of the Primary Study Area in Merced County. San Luis Reservoir provides short-term offstream storage for water taken from the Sacramento-San Joaquin Delta, and is used to regulate distribution through the California Aqueduct. The reservoir is part of the San Luis Reservoir State Recreation Area, which provides recreational opportunities such as fishing, boating and camping to the public (Bureau of Reclamation [Reclamation] and California Department of Parks and Recreation, 2012). The existing visual environment of the areas surrounding San Luis Reservoir is hilly grassland interspersed with stands of oak trees and scrub habitat. San Luis Reservoir is drawn down annually, typically between March and the end of August. Because of the annual draw down, the aesthetic character of the reservoir is seasonal and depends primarily on annual precipitation; during Dry to Critical years, low water levels in the reservoir can expose wide areas of barren shoreline. During Normal to Wet years, higher water levels in the reservoir support riparian and upland vegetation, which is generally considered by recreationists to be a scenic vista of high aesthetic value. SR 152 in Merced County is an officially designated State Scenic Highway that follows the northern shoreline of San Luis Reservoir for approximately 6 miles, offering extended views of the water body and its surroundings (California Department of Transportation [Caltrans], 2012).

The Extended Study Area includes several other reservoirs operated within the SWP and CVP service areas and along the California Aqueduct. The most notable among them include the Tri-Dam Reservoir Complex (New Hogan, Comanche, and Pardee reservoirs), New Melones Reservoir, Don Pedro Reservoir, Lake McClure, Pyramid Lake, Castaic Lake, Silverwood Lake, and Lake Perris. These other reservoirs provide recreational opportunities to thousands of visitors each year. Because of the variability in annual precipitation, the existing visual quality of these reservoirs is seasonal and can range from moderate to high.

Level 4 wildlife refuge water supply delivery areas that could be affected by Project operations are located within the Extended Study Area. These delivery areas are described in Chapter 1 Introduction and shown on Figure 1-4 in Chapter 1 Introduction. The existing environmental settings of the wildlife refuges included in the Extended Study Area are of high visual quality, because they consist of vast undisturbed lands that include wetlands, grassland, and riparian areas with high biodiversity.

30.2.3 Secondary Study Area

The Secondary Study Area is defined as the CVP and SWP reservoirs, rivers, creeks, and associated floodplains that could be affected by Project operations, located in 18 counties (14 of the 18 counties are

also located in the Extended Study Area). The individual water bodies included in the Secondary Study Area are considered to be scenic resources of high visual quality, and are listed below:

- Trinity Lake
- Lewiston Lake
- Trinity River
- Klamath River (downstream of Trinity River)
- Whiskeytown Lake
- Spring Creek
- Shasta Lake
- Keswick Reservoir
- Clear Creek
- Sacramento River
- Lake Oroville
- Thermalito Complex (Diversion Pool, Forebay, Afterbay)
- Feather River
- Sutter Bypass
- Yolo Bypass
- Folsom Lake
- Lake Natoma
- American River
- Sacramento-San Joaquin Delta
- Suisun Bay
- San Pablo Bay
- San Francisco Bay

Several State Recreation Areas are located along the lakes, reservoirs, and rivers, and provide ample recreational opportunities and scenic views of open water and natural vegetation to recreationists, residents, and motorists. There are several State-designated scenic highways with views of the Secondary Study Area water bodies (Caltrans, 2012).

The Sacramento River flows between the Cascade, Coast Range, and Sierra Nevada ranges through the Central Valley. Throughout the year, the volume of water in the Sacramento River varies greatly, accounting for some degree of visual change in the river. The Red Bluff Pumping Plant (RBPP) (Photo 26 on Figure 30-2Q; all Chapter 30 figures are located at the end of this chapter), which is included in the Secondary Study Area, is located on the Sacramento River approximately 2 miles southeast of the City of Red Bluff, in Tehama County. The RBPP site's existing visual character is highly developed on the generally scenic Sacramento River. To the west of the RBPP, the area is characterized by suburban, industrial, and transitioning agricultural land uses. Across the Sacramento River to the east of the RBPP, the area is characterized by the open natural vegetation of the Red Bluff Recreation Area, beyond which lies agricultural and rural residential land uses. There are no State-designated highways in the viewshed of the RBPP.

30.2.4 Primary Study Area

30.2.4.1 Regional Landscape Description

Glenn County

Glenn County's landscape consists of urban development in relatively flat land that is associated with small cities and towns (e.g., Orland, Willows, Hamilton City, and Artois), rural residences beyond the borders of the communities, undeveloped open space, agricultural land (crops and orchards), industrial and highway commercial land uses along the I-5 corridor, and recreation areas (Black Butte Reservoir,

Sacramento River, wildlife areas, and wildlife refuges). Away from the town centers, fewer roadways exist, and public access to lands is limited.

The western portion of the county consists of hilly forested terrain and oak woodlands. In the lowlands, the landscape is characterized by grassland and woodland vegetation, with occasional wetlands, vernal pools, and riparian areas. The attributes of the landscape change over the course of a year in response to seasonal changes and weather. Vegetation, agricultural crops, and land use patterns vary according to the time of year and farming activities. For instance, the grasslands and cultivated areas of the county are a lush green in spring and early summer; as the hot weather continues, the grasslands turn a honey-brown hue, and the crops mature.

Water features in Glenn County include Black Butte Reservoir, which provides flood protection for local towns and agricultural lands. It is located on Stony Creek west of the City of Orland and the Sacramento River, which, in places, forms the county's eastern border with Butte County.

Although Glenn County contains numerous areas and viewsheds with relatively high scenic value, there are no officially designated scenic vista points. Scenic resources include the Sacramento River and streams, foothill and mountain areas, agricultural landscapes on the valley floor, the Sacramento NWR, glimpses of wildlife, and a distant view of Mount Lassen. The Glenn County General Plan identifies twelve important biological resource areas in Glenn County that are of outstanding scenic value. Six of the areas (Llano Seco Unit of the Upper Butte Basin Wildlife Area (WA), Oxbow Waterfowl Area, Oxbow Heron Rookery, Princeton Riparian Woodland, Sacramento River WA, and Sacramento River Oxbow Preserve) are associated with the Sacramento River and are intended to protect the unique riparian forest, marsh, and floodplain bordering the Sacramento River. Two of the areas (St. Johns Mountain and Sheetiron Mountain) are within the Mendocino National Forest. The remaining areas are the Sacramento NWR, Black Butte and Stony Gorge reservoirs, and Orland Buttes (Glenn County, 1993).

There are no eligible or State-designated scenic highways within Glenn County (Caltrans, 2012); however, SR 45 and SR 162 have been recommended for scenic highway status due to the presence of many unofficial scenic vistas of the features listed above. It has also been suggested that SR 32 and County Road 99W be considered for scenic highway status (Glenn County, 1993).

The visual quality of Glenn County is moderate to high due to the expansive open space provided by the Yolla Bolly, Middle Eel, and Snow Mountain designated wilderness areas in the west, aforementioned biological resource areas, large agricultural areas, and the undeveloped upland areas on the west. Existing sources of light and glare in the County include residential, agricultural, commercial and industrial development, vehicles traveling on roadways, and safety lighting on tall structures, such as transmission towers and cell towers.

Colusa County

Colusa County's landscape includes urban development in relatively flat terrain. Cities and small towns, such as Williams, Colusa, Arbuckle, Princeton, Stonyford, and Maxwell, exist along the major transportation corridors (I-5 and the state highways in the county). Land uses include the rural residences beyond the borders of the communities, undeveloped open space, agricultural land (crops and orchards), industrial and highway commercial land uses along the I-5 corridor, and recreation areas (several wildlife refuges and the Sacramento River). Away from the town centers, fewer roadways exist, and public access to lands is limited.

The western portion of the county is typified by the undulating hills of grassland and oak woodland terrain, which transition to rugged Klamath and North Coast mountain ranges reaching elevations in excess of 7,000 feet above the valley floor. In the lowlands, the landscape is characterized by grassland, agricultural and rural landscapes, with occasional wetlands, vernal pools, and riparian areas. The agricultural landscape is dominated by crops (e.g., rice, almonds, vegetables, tomatoes, wheat, hay), rangeland livestock, and other ancillary facilities including outbuildings, tractors, irrigation, and drainage works. Vegetation, agricultural crops, and land use patterns vary according to the time of year and farming activities. For instance, the rangelands and cultivated areas of the county are a lush green in spring and early summer; as the hot weather continues, the grasslands turn a honey-brown hue, and the crops mature.

Although Colusa County contains numerous areas and viewsheds with relatively high scenic value, there are no officially designated scenic vista points in the County. Scenic resources and unofficial scenic vistas include features, such as the Sacramento River, Snow Mountain, Sutter Buttes, Mendocino National Forest, Colusa NWR, Delevan NWR, Sacramento NWR, Willow Creek-Lurline Wildlife Management Area, North Central Valley Wildlife Management Area, Colusa Bypass WA, Sacramento River WA, Colusa-Sacramento State Recreation Area, as well as the vast agricultural lands located throughout the County (Colusa County, 2011).

There are no officially designated scenic highways or scenic corridors in Colusa County (Caltrans, 2012). However, there are two Eligible State Scenic Highway Corridors in Colusa County that have not yet been officially designated: SR 20 in the southwest between the county line and the junction of SR 20 and SR 16, and SR 16 between the county line and the aforementioned junction (Colusa County, 2011).

The general visual quality of Colusa County is moderate to high due to the expansive open space provided by the large agricultural areas, water features (including rivers, lakes, reservoirs, and wetlands), and the undeveloped upland areas on the west. Existing sources of light and glare include residential, agricultural, commercial and industrial development, vehicles traveling on roadways, water features, and safety lighting on tall structures, such as transmission towers and cell towers.

30.2.4.2 Project Viewshed

The visual sphere of influence (SOI) for the Project represents the area from which the Project has the potential to be visible. Beyond the SOI, a project's features would not be easily visible due to screening, or would be of such a small size in the background field of view that potentially significant impacts on visual resources would not be expected. Depending on the location of the viewer, views toward the proposed Sites Reservoir could be blocked by intervening terrain, trees, shrubs, or other features in the viewer's immediate foreground. For this project, hills that would form the outer boundaries of the proposed reservoir are considered to also form the visual SOI for the Sites Reservoir. The SOI for the other Project facilities would vary because of the screening effects of minor variations in terrain, adjacent development, or vegetation, which would limit views of the facilities. The Project viewshed for the four alternatives was determined by mapping a 1-mile buffer around Project facilities. This viewshed is considered sufficient given the topography of the study areas, the height and massing of Project facilities, and the number and location of sensitive receptors in the study areas. Additionally, the adopted General Plans of Glenn and Colusa counties each encourage the preservation of existing agricultural land uses and containment of growth and development to urban infill and revitalization within existing towns and cities (Colusa County, 2012; Glenn County, 1993).

30.2.4.3 Project Facility Footprints Landscape Description

Figures 30-1A to 30-1D show the locations of the Project facilities and where landscape character photographs were taken when conducting Project site visits. They also show the direction that the camera was pointed when taking the photographs. Figures 30-2A to 30-2W are landscape character photos that are intended to aid the reader in understanding the nature of the area in which the Project would be constructed, operated, and maintained. Descriptions of the landscapes at and adjacent to the Project facility footprints are provided in subsequent sections.

Sites Reservoir Complex

The Sites Reservoir Complex includes the Project features and facilities that are geographically or functionally associated with the Sites Reservoir. This complex would be composed of the Sites Reservoir Inundation Area, the dams that would form the reservoir, the offsite borrow locations for materials required to construct the dams, the inlet/outlet structure, the pumping/generating plant and associated electrical switchyard, the tunnel that would connect the pumping/generating plant to the inlet/outlet structure, and the bridge, roads, recreation areas, and office/maintenance area. A more detailed description of these facilities is provided in Chapter 3, Description of the Sites Reservoir Project Alternatives.

The affected environment of the Sites Reservoir Inundation Area is the same for the two proposed reservoir sizes (and all four alternatives). The landscape of the proposed inundation area is characterized by moderate to low elevation and northwest-southeast trending ridgelines, and separated by valleys of varying steepness and width. Ridgelines surrounding the proposed reservoir rise to between approximately 500 and 1,200 feet above mean sea level. Overall, the visual quality of the proposed reservoir inundation area is considered high because the natural foothills landscape has been largely preserved and unaltered. Visual sensitivity is moderate to high because scenic views from the proposed inundation area can be extensive in duration and consist of a mixture of low-lying rangeland, active agricultural development and livestock in the foreground, hilly grasslands in the middleground, with occasional views of densely vegetated ridgelines and hillsides in the background to the west.

The rural town of Sites is located within the proposed reservoir inundation area (Figures 30-2B and 30-2C). The town consists of a concentrated grouping of 13 rural residences and peripheral structures including fences, sheds, garages, barns, silos, pump houses and water towers, flat agricultural land, and mature vegetation including native and ornamental trees. South of the town of Sites, the proposed inundation area consists predominantly of low-lying grassy rangeland interspersed with a few rural residences and peripheral structures, and oak trees. North of the town, the lowland transitions to hilly rangeland, with a few farmed parcels, rural residences, peripheral structures, and interspersed wetlands at lower elevations. In total, approximately 26 houses, 31 barns, 27 sheds, 4 shops, and 20 other peripheral structures are located within the proposed inundation area.

There are no State-designated scenic highways within or near the proposed Sites Reservoir Inundation Area (Caltrans, 2012). However, Maxwell Sites Road and Sites Lodoga Road, which traverse the proposed inundation area from southeast to northwest, have been recommended for scenic designation (Colusa County, 1989). Viewers of the proposed reservoir inundation area are limited to residents and motorists who travel on those roadways.

Predominantly unpaved dirt roads provide access to residences and farming operations within the proposed inundation area. Automobiles traveling along the unpaved roads generate large plumes of dust visible from a distance of up to 1 mile. Existing sources of light and glare are associated with residences

and peripheral structures, and the automobiles that use the roads. The proposed Sites Reservoir Inundation Area is shown on Figures 30-2A through 30-2C.

Sites Reservoir would require the construction of several dams; seven saddle dams are proposed for Alternative A and nine saddle dams are proposed for Alternatives B, C, and D; Golden Gate Dam and Sites Dam are proposed for Alternatives A, B, C, and D. The dam locations for Alternatives A, B, C, and D are of high visual quality due to the presence of several distinctive rock outcroppings, and undisturbed and abundant vegetation. There are no State-designated scenic highways near or with views of the proposed dam locations (Caltrans, 2012), nor are there existing sources of light or glare. Viewers of the proposed dam locations are limited to motorists along the county roadways and are typically of short duration due to area terrain; therefore, visual sensitivity is low to moderate.

Golden Gate Dam would be constructed between two hillsides approximately 2 miles northeast of the town of Sites. The existing landscape consists of rolling grassland and vegetated rocky steppes, with several tree snags located in the lowland area. The proposed Golden Gate Dam location is shown on Figures 30-2D and 30-2E.

Sites Dam would be constructed between two steep hillsides approximately 0.3 mile east of the town of Sites upon a 0.25-mile-long section of the existing Maxwell Sites Road. The landscape of the north-facing right abutment location is densely vegetated with oak woodland and other native tree species. The landscape of the south-facing left abutment is predominantly rocky outcroppings and grassland, interspersed with a few oak trees. The proposed Sites Dam location is shown on Figures 30-2E and 30-2F.

Saddle dams would be located between hilltops along the northeastern boundary of the proposed reservoir. The existing landscape generally consists of gently rolling hills vegetated with non-native grasses. Figures 30-2F and 30-2G provide a representative view of the existing landscape at the proposed saddle dam locations.

Up to four recreation areas and a boat ramp are proposed for Alternatives A, B, C, and D. The recreation facility locations are of high visual quality with many scenic views of the open grassy lowlands, and surrounding rolling hills and oak woodlands. There are no State-designated scenic highways near or with views of the proposed recreation areas (Caltrans, 2012), nor are there existing sources of light or glare. Visual sensitivity is moderate because viewers of the recreation areas are limited to residents and users of the existing county roadways. These viewers have the opportunity for extended views of the recreation area locations from Huffmaster Road and Peterson Road. There are no public views of the proposed recreation facilities from outside of the proposed inundation area. The visual character of the individual proposed recreation areas is summarized in Table 30-1, and photos of the Peninsula Hills, Stone Corral, Antelope Island, Lurline Headwaters recreation areas, and Boat Ramp are included as Figures 30-2A, 30-2H, 30-2I, 30-2J, 30-2K, and 30-2W.

Table 30-1
Visual Character of the Proposed Recreation Areas

Figure No.	Recreation Area	Location[a]	Size (acres)	Existing Visual Character
30-2H	Stone Corral	Central East	235	Hilly grasslands with scattered oak tree stands
30-2I, 30-2J	Peninsula Hills	Northwest	373	Hilly oak woodlands interspersed between open rolling grasslands
30-2J	Antelope Island	Southwest	49	Hilly oak woodlands

Figure No.	Recreation Area	Location[a]	Size (acres)	Existing Visual Character
30-2K	Lurline Headwaters	Southeast	219	Low-lying open grasslands interspersed with areas of hilly oak woodlands to the west
30-2W	Boat Ramp	West	54	Sites Lodoga Road, surrounded on both sides by hilly grasslands with scattered oak tree stands

[a]Relative to proposed Site Reservoir Inundation Area.

The proposed Sites Reservoir would inundate several roads within Colusa County's jurisdiction, including portions of Maxwell Sites Road, Sites Lodoga Road, Huffmaster Road, and Peterson Road. Approximately 44 miles of new public access roads and approximately 2 miles of new private access roads would provide construction and maintenance access to Project facilities, as well as provide public access to proposed recreation areas. There are no State-designated scenic highways near or with views of the proposed road relocations and South Bridge (Caltrans, 2012). Views of the proposed road relocations and South Bridge alignment are of high visual quality due to the abundance of open grasslands in the foreground, transitioning to rolling hills and oak woodlands in the middle- and background. Visual sensitivity is low and views are brief because viewers of the road relocations and south bridge alignment are limited to motorists along existing roads. Existing sources of light and glare include vehicles using the existing system of roads.

The portions of Maxwell Sites and Sites Lodoga roads that would be inundated by the proposed reservoir would be replaced by the proposed South Bridge serviced by approach roads from the east and west. This route would also provide access to the proposed Stone Corral Recreation Area. The existing visual character of the proposed South Bridge location traversing west from the eastern access route is dominated by rolling grasslands through the central proposed inundation area to the western terminus of the bridge. A representative view of the proposed South Bridge alignment is provided on Figure 30-2K. The western South Bridge route transitions into oak woodland and winds through approximately 2.25 miles of moderately variable topography to rejoin the existing Sites Lodoga Road.

The proposed North Road and Saddle Dam Road (both new gravel roads) would provide access to northern portions of the reservoir, the saddle dams, and the Saddle Dam Recreation Area. North Road would be improved beginning at the intersection of the existing County Road 69 and the Tehama-Colusa Canal on the east, and would follow the route of County Road 69 through hilly grassland for approximately 4.6 miles to its western terminus. The new route would then be extended west for approximately 1.8 miles through rolling grasslands interspersed with small intermittent wetlands. Saddle Dam Road would be aligned north to south for approximately 2 miles through similar terrain if Alternative A is implemented, and 3 miles if Alternatives B, C, or D is implemented. Two residences and four peripheral structures would be demolished that are located along the North Road access route and within the Project Buffer. Public views of the existing County Road 69 are limited due to varying topography. There are no existing public views of the new segment of the North Road or Saddle Dam Road locations.

The proposed Eastside Road would connect the proposed Stone Corral Road to County Road 69, providing access to the northern portion of the reservoir, Holthouse Reservoir Complex, Golden Gate Dam and appurtenant structures, and to properties northeast of the proposed reservoir. Eastside Road and Stone Corral Road would be aligned north to south along the grassy ridgelines between the proposed reservoir inundation area on the west and the existing upland agricultural areas on the east. The proposed Eastside Road location is visible from Maxwell Sites Road on the south and County Road 69 on the north.

Along the western side of the proposed reservoir, the proposed Peninsula Road would provide access from Sites Lodoga Road to the Peninsula Hills Recreation Area. Peninsula Road would generally traverse from east to west, winding sharply through hilly oak woodland and grassland.

The proposed Sulphur Gap Road would provide access to southern portions of the proposed reservoir, the proposed Lurline Headwaters Recreation Area, private property adjacent to the proposed Com Road (shown in Photo 33 on Figure 30-2U), and connect to Huffmaster Road. Sulphur Gap Road would traverse in a generally northeast-to-southwest direction beginning in the low-lying rangeland on the east, through hilly grassland and moderately steep oak woodland, and intersecting with Huffmaster Road in the grassy rangeland at the southern tip of the proposed reservoir inundation area.

The Sites Inlet/Outlet Structure would consist of separate inlet and outlet structures connected by an approximately 0.8-mile tunnel. The inlet structure would be located on the ridgeline south of the proposed Golden Gate Dam, and the outlet structure would be located adjacent to, and would connect with, the existing Funks Reservoir. The electrical switchyard would be located north of the outlet structure. The tunnel, switchyard, and outlet structure would be located in an open hilly grassland area and rolling rangeland. The Field Office Maintenance Yard would be constructed on 18 acres southwest of and adjacent to the existing Funks Reservoir. One existing rural residence and two auxiliary structures are located in the footprint of the proposed outlet structure. Utilitarian features in the landscape include electrical distribution lines, poles, and fences. Views of the proposed facility locations are of high visual quality due to the presence of open hilly grasslands with limited development. Views from the area are obstructed by ridgelines, which focus views on the natural character of the hills in the foreground. Visual sensitivity is low because public views of this area are limited and brief due to varied topography. There are no State-designated scenic highways near or with views of the proposed intake/outlet structure and ancillary facilities (Caltrans, 2012). Existing sources of light and glare include the existing residence and vehicles using the existing Funks Reservoir maintenance roads. The existing visual character of the Outlet Structure and Pumping/Generating Plant locations is shown on Figure 30-2L. The existing visual character of the Field Office Maintenance Yard location is shown on Figure 30-2M.

Holthouse Reservoir Complex

The Holthouse Reservoir Complex includes the Project features and facilities that are geographically or functionally associated with the Holthouse Reservoir. This complex would be composed of the Holthouse Reservoir inundation area, the dam that would form the reservoir, the Holthouse Pumping Plant, the Holthouse spillway and stilling basin and spillway bridge, the Western Area Power Authority (WAPA) transmission line relocation, the approach channel for the Sites pumping/generating plant, existing Tehama-Colusa Main Canal connections, and Tehama-Colusa Main Canal construction bypass pipeline. A more detailed description of these facilities is provided in Chapter 3 Description of the Sites Reservoir Project Alternatives.

The Holthouse Reservoir Complex would be located east of and adjacent to the existing Funks Reservoir, Tehama-Colusa Canal, and private service road in an area of gently rolling hills vegetated with non-native grasses and scrub on the west, transitioning to flat active agricultural land on the east. The existing Funks Reservoir water levels fluctuate annually and seasonally. At full capacity, the approximately 230-acre reservoir is a water feature of high visual quality. During Dry years and late summer months, the water retreats to expose a barren shoreline of moderate visual quality. The area surrounding Funks Reservoir consists mainly of non-native grasses. The existing reservoir outfall to Funks Creek bisects the area and is lined with riparian trees and shrubs. The proposed Holthouse Reservoir location is traversed from north to

south by parallel 500-kV and 230-kV WAPA electrical transmission lines on lattice towers. There are no State-designated scenic highways or vista points near, or with views of, the proposed Holthouse Reservoir Complex facilities (Caltrans, 2012). Views of the proposed facility locations are of moderate to high visual quality due to the presence of a seasonal water feature amidst an area with scattered utility structures. Viewers of the Holthouse Reservoir Complex area are limited to operations and maintenance staff for the existing Funks Reservoir roads and facilities, and workers in the adjacent orchards and agricultural fields; therefore, although views can be of extended duration, visual sensitivity is low to moderate. Existing sources of light and glare include Funks Reservoir facilities, vehicles using the existing service roads, and nighttime safety lighting on transmission towers. Figure 30-2N provides a view of the Holthouse Reservoir Complex location from the existing Funks Reservoir near Funks Creek and the Funks Dam spillway. The existing Funks Reservoir is shown on Figure 30-2M.

Terminal Regulating Reservoir Complex

The Terminal Regulating Reservoir (TRR) Complex includes the Project features and facilities that are geographically or functionally associated with the TRR. This complex would be composed of the TRR inundation area, the dam that would form the reservoir, the TRR Pumping and Generating Plant and switchyard, the Glenn-Colusa Irrigation District (GCID) Main Canal Connection to TRR, TRR pipeline and Pipeline Road, and GCID Main Canal Facilities Modifications. A more detailed description of these facilities is provided in Chapter 3 Description of the Sites Reservoir Project Alternatives.

The TRR, Pumping/Generating Plant, and Electrical Switchyard would be located in an area of existing flat agricultural fields between McDermott Road on the east and the GCID Main Canal on the west. There are rural residences, farms, and auxiliary structures with views of the area. The 3.5-mile-long bidirectional TRR Pipeline and TRR Pipeline Road would be constructed between the TRR Pumping/ Generating Plant southwest to the Holthouse Reservoir Spillway and Stilling Basin. The GCID Main Canal Connection to the TRR would connect the existing canal to the east side of the proposed reservoir. The TRR to Funks Creek Pipeline would connect the proposed reservoir to the existing creek to the south of the TRR location (Figure 30-2Q). Because of the minimal topographic variation within the agricultural region, views are fairly homogeneous in form, texture, and color. Foreground views are typically composed of large areas of flat agricultural land interspersed with farm roads, canals and associated infrastructure, tree clusters, electric distribution lines and poles, and occasional rural residences. The proposed facility locations are of moderate visual quality and sensitivity, because despite the homogeneity of views and the obvious imprint of humans upon the landscape, the area retains an open-space character due to the presence of agricultural crops, stands of native plants, and the minimal number of permanent structures. Views of the proposed facility location range from brief to extended, because the area is adjacent to several county roads used by motorists, existing rural residences, and agricultural fields.

Views from the proposed TRR location are of moderate visual quality and are relatively unobstructed. Looking northwest from the southeast corner of the proposed TRR facility location (Figure 30-2R), the 31-acre Colusa Generating Station is visible in the background approximately 2.5 miles away. There are public views of the facility location from adjacent residences, McDermott Road on the east, and Lenahan Road on the southeast. Utilitarian features in the middleground and background include electric distribution lines and poles, high-voltage lattice transmission structures, and fences. There are no State-designated scenic highways near or with views of the proposed TRR, pipeline alignment, and auxiliary facilities (Caltrans, 2012). Existing sources of light and glare include existing residences, the Colusa Generating Station, and vehicles traveling on the existing agricultural access roads.

The GCID Main Canal Facilities Modifications would include construction of a new headgate structure, concrete lining of the canal for 200 feet downstream of the new headgate structure, and replacement of a railroad siphon. The new headgate structure and canal lining would be completed within a portion of the GCID Main Canal that is bounded on the northeast by existing GCID maintenance facilities and orchards, and on the southwest by low-density industrial development, agricultural fields, single-family rural residences, and constructed wetlands. The proposed GCID Main Canal Headgate Structure and Canal Lining location is shown on Figure 30-2O.

The railroad siphon replacement would be constructed at the intersection of the GCID Main Canal and the railway on the southeast boundary of the town of Willows. The visual setting of the area is characterized by predominantly residential and light industrial land uses to the north and west, and agricultural to the south and east. The location of the GCID Main Canal Railroad Siphon Replacement is shown on Figure 30-2P.

These two areas are of low to moderate visual quality due to the conspicuous presence of infrastructure and industrial development amidst the low-density residential and agricultural development typical of communities in the region. Visual sensitivity is moderate due to the large number of potentially sensitive viewers in the vicinity in conjunction with limited views and low to moderate visual quality.

The topography in both areas is generally flat. Views toward the east and west beyond the facilities are obstructed by orchards and urban development, which focus views on the utilitarian character of the canal upstream and downstream of the proposed improvements. There are no State-designated scenic highways or scenic vistas in the vicinity of the proposed improvements (Caltrans, 2012). Existing sources of light and glare include nearby residential and industrial development, vehicles on nearby roads, and the existing GCID facilities.

Delevan Pipeline Complex

The Delevan Pipeline Complex includes the Project features and facilities that are geographically or functionally associated with the Delevan Pipeline. This complex would be composed of the Delevan Pipeline Intake/Discharge Facilities (flat plate fish screen structure; forebay, levee tubes, and afterbay; pumping/generating plant and switchyard; maintenance and electrical buildings; and other electrical and mechanical features), and the Delevan Pipeline. A more detailed description of these facilities is provided in Chapter 3 Description of the Sites Reservoir Project Alternatives.

The Delevan Pipeline Intake/Discharge Facilities would be located on the western riverbank of the Sacramento River, downstream from the existing Maxwell Irrigation District Pumping Plant. The existing pumping plant is a large industrial facility that is of low visual quality. The surrounding visual setting is characterized by the Sacramento River and the associated riparian habitat along its levees. The Sacramento River and its generally undeveloped riverbanks are considered a scenic resource and are of moderate to high visual quality because the river is lined by a variety of sandy shorelines, riparian vegetation, steep rocky riverbanks, and levees. There are no State-designated scenic highways near or with views of the proposed facility location, and there are no existing sources of light or glare (Caltrans, 2012). Views of Sacramento River from the west are obstructed by the levee. Access to the Project facility location is restricted to Maxwell Irrigation District employees only, and views from the east are limited to recreationists and agricultural landowners. Therefore, visual sensitivity is low, and views are generally brief. The proposed location of the Delevan Pipeline Intake/Discharge Facilities is shown on Figure 30-2U.

For all four alternatives, the Delevan Pipeline would be aligned from the proposed Holthouse Spillway and Stilling Basin, and would parallel the TRR Pipeline east to the TRR Pumping/Generating Plant. The Delevan Pipeline would then parallel the Sites/Delevan Overhead Power Line route to the Sacramento River. (The Delevan Pipeline would follow the same route for Alternative D, but the transmission line would not be at this location.) The eastern segments of the pipeline would traverse flat agricultural land interspersed with county roads, rural residences, farms, industrial land uses, and other linear features such as I-5, Old Highway 99W, SR 45, and railroad tracks. The proposed alignment would be located approximately 200 yards north of the boundary of the Delevan NWR. The electrical switchyard for the Delevan pumping/generating plant would be located at the Delevan Pumping/Generating Plant.

The proposed pipeline alignment is of moderate visual quality due to the presence of primarily rural and agricultural land uses that are representative of the region. Several viewer types would have views of the pipeline alignment during construction, although the pipeline would be underground and out of view during operations. Motorists traveling southbound on I-5, Old Highway 99W, SR 45, and county roads would have very brief views of the alignment, and motorists traveling westbound on Delevan Road and Lenahan Road would have views of moderate duration. Area residents and recreational users of the Delevan NWR could have views of extended duration. There are no State-designated scenic highways near or with views of the proposed facilities (Caltrans, 2012). Existing sources of light and glare include vehicles on county roads, Old Highway 99W, SR 45, I-5, and lights from residences and agricultural facilities. The alignments for the proposed Delevan Pipeline are shown on Figures 30-2S and 30-2T.

Overhead Power Lines and Substations

For alternatives A, B, and C, the proposed Sites/Delevan Overhead Power Line would be aligned from the existing WAPA or Pacific Gas and Electric Company (PG&E) transmission lines, west to the Sites Pumping/Generating Plant and east to the Delevan Pumping and Generating Plant. The segment from the existing transmission lines to the Sites Pumping and Generating Plant would cross rolling rangeland transitioning into flat agricultural land. For Alternatives A and C, the Sites/Delevan Overhead Power Line would continue from the PG&E or WAPA transmission line for approximately 10 miles east to the proposed Delevan Pipeline Intake/Discharge Facilities along the Sacramento River. The proposed pipeline and transmission line alignment is of moderate visual quality and sensitivity due to the presence of primarily rural and agricultural land uses that are representative of the region. Several viewer types have views of the pipeline and transmission line alignment. Motorists traveling southbound on I-5, Old Highway 99W, SR 45, and county roads would have very brief views of the alignment, and motorists traveling westbound on Delevan Road and Lenahan Road would have views of moderate duration. Area residents and recreational users of the Delevan NWR could have views of extended duration. There are no State-designated scenic highways near or with views of the proposed facilities (Caltrans, 2012). Existing sources of light and glare include vehicles on county roads, Old Highway 99W, SR 45, and I-5, and light from residences and agricultural facilities. The alignment for the proposed Delevan Pipeline and Transmission Line facilities is shown on Figures 30-2S and 30-2T.

For Alternative D, the proposed north-south Delevan Overhead Power Line would be aligned along SR 45 in Colusa County for the majority of its alignment. Motorists traveling northbound and southbound on SR 45 would have views of moderate duration of the alignment for approximately 10 miles. At approximately Harbison Road, the Delevan Overhead Power Line would deviate west of SR 45 before connecting to a proposed, new substation west of the City of Colusa, near SR 20. The segment of the Delevan Overhead Power Line that would deviate from SR 45 would continue through agricultural areas, where row crops and orchards dominate the existing visual environment; however, there is also a housing

development west of the city of Colusa, and the proposed transmission line may traverse the properties located within the development. The alignment for the proposed north-south aligned Transmission Line facilities is shown on Figure 30-2V.

Project Buffer

The Project Buffer would surround all of the Primary Study Area Project facilities, except for the Delevan Pipeline and Transmission Line, TRR Pipeline and Road, Delevan Pipeline Electrical Switchyard, TRR to Funks Creek Pipeline, and portions of the other Project roads. The existing visual setting within a given area of the Project Buffer would, therefore, be the same as that described for the Project facilities that would be located within that area.

30.3 Environmental Impacts/Environmental Consequences

30.3.1 Evaluation Criteria and Significance Thresholds

Significance criteria represent the environmental thresholds that were used to identify whether an impact would be potentially significant. Appendix G of the *CEQA Guidelines* suggests the following evaluation criteria for aesthetics:

Would the Project:

- Have a substantial adverse effect on a scenic vista?
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?
- Substantially degrade the existing visual character or quality of the site and its surroundings?
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

The evaluation criteria used for this impact analysis represent a combination of the Appendix G criteria and professional judgment that considers current regulations, standards, and/or consultation with agencies, knowledge of the area, and the context and intensity of the environmental effects, as required pursuant to the National Environmental Policy Act. For the purposes of this analysis, an alternative would result in a potentially significant impact if it would result in any of the following:

- A substantial adverse effect on a scenic vista.
- Substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway.
- Substantial degradation of the existing visual character or quality of the site and its surroundings.
- A new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

30.3.2 Impact Assessment Assumptions and Methodology

Combinations of Project facilities were used to create Alternatives A, B, C, C_1, and D. In all resource chapters, the Authority and Reclamation described the potential impacts associated with the construction,

operation, and maintenance of each of the Project facilities for each of the five action alternatives. Some Project features/facilities and operations (e.g., reservoir size, overhead power line alignments, provision of water for local uses) differ by alternative, and are evaluated in detail within each of the resource areas chapters. As such, the Authority has evaluated all potential impacts with each feature individually, and may choose to select or combine individual features as determined necessary.

Impacts associated with the construction, operation, and maintenance for Alternative C_1 would be the same as Alternative C and are therefore not discussed separately below.

30.3.2.1 Assumptions

The following assumptions were made regarding Project-related construction, operation, and maintenance impacts on visual resources:

- Direct Project-related construction, operation, and maintenance activities would occur in the Primary Study Area.
- Direct Project-related operational effects would occur in the Secondary Study Area.
- The only direct Project-related construction activity that would occur in the Secondary Study Area is the installation of two additional pumps into existing bays at the RBPP.
- The only direct Project-related maintenance activity that would occur in the Secondary Study Area is the sediment removal and disposal at the RBPP.
- No direct Project-related construction or maintenance activities would occur in the Extended Study Area.
- Direct Project-related operational effects that would occur in the Extended Study Area are related to San Luis Reservoir operation; increased reliability of water supply to agricultural, municipal, and industrial water users; and the provision of an alternate Level 4 wildlife refuge water supply. Indirect effects on the operation of certain facilities that are located in the Extended Study Area, and indirect effects on the consequent water deliveries made by those facilities, would occur as a result of implementing the alternatives.
- No additional channel stabilization, grade control measures, or dredging in the Sacramento River at or upstream of the Delevan Pipeline Intake/Discharge Facilities would be required.
- Construction activities are anticipated to occur between the hours of 6:00 a.m. and 7:00 p.m. Monday through Friday. Nighttime and weekend construction are not planned, but may occur on an as-needed basis.

30.3.2.2 Methodology

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 and 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 Department of Water Resources has projected future water demands through 2030 conditions that assume the vast majority of Central Valley Project (CVP) and State Water Project (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 No Project/No Action Condition. As described in Chapter 2 Alternative Analysis, the primary difference in these projected water demands would be in the Sacramento Valley; at the time of preparation of this EIR/EIS, the water demands have expanded to the levels projected to be achieved around 2030.

Accordingly, Existing Conditions and the No Project/No Action alternatives are assumed to be the same for this EIR/EIS and are referred to as the Existing Conditions/No Project/No Action Condition, which is further discussed in Chapter 2 Alternatives Analysis. With respect to applicable reasonably foreseeable plans, projects, programs and policies that may be implemented in the future but that have not yet been approved, these are included as part of the analysis of cumulative impacts discussed in Chapter 35 Cumulative Impacts.

The visual resources assessment is a multistep process, including:

- Defining baseline visual resources by:
  - Determining the visual environment of the Extended, Secondary, and Primary study areas
  - Characterizing the visual resources within the three study areas
  - Identifying viewer groups, viewpoints, exposures, sensitivities, and anticipated responses to those resources
- Describing the visual change that is expected from Project construction and operation
- Determining the degree of visual impact by considering:
  - The consistency of the visual changes from the Project with the Tehama, Glenn, and Colusa county general plans
  - The compatibility of the visual changes from the Project with the nearby landscape; whether the Project would substantially degrade the existing visual quality of the Project facility sites or their surrounding landscapes
  - The number of people who would have views of the proposed facilities, their typical sensitivity to landscape change, and the duration of their views
  - Whether a scenic vista, scenic highway, or a scenic resource would be affected
  - Whether Project facilities would introduce a new source of substantial light or glare, which would adversely affect day or nighttime views in the area
- Developing mitigation for identified potentially significant impacts on visual resources

The degree of visual impact depends on how perceptible the adverse change is. The perception of a visual impact is a function of the Project features, context, and viewing conditions (angle, distance, and typical viewing direction). The visual impact levels used in this analysis indicate the relative degree of change to the landscape that each alternative would create by considering visual sensitivity, visual contrast, project dominance, view impairment, and consistency with county General Plan policies.

Visual Sensitivity

The quality of the visual experience depends on the visual resources and the viewer response to those resources. When characterizing visual sensitivity, the following must be considered: the type of viewer group; the viewer exposure (their location, number of people in group, and duration and frequency of their view); and viewer profile (viewer activity, awareness, and values). For each of the viewer groups identified in the Project area, viewer exposure conditions were determined based on knowledge of the Project facility areas, review of aerial imagery, and site visits.

Visual Contrast

Visual contrast is a measure of the degree of change in line, form, color, and texture[2] that the Project would create when compared to the Existing Conditions. Visual contrast ranges from "none" to "high", and is defined as:

- *None* – The element contrast is not visible or perceived
- *Low* – The element contrast can be seen but does not attract attention
- *Moderate* – The element contrast begins to attract attention and dominate the characteristic landscape
- *High* – The element contrast attracts the viewer's attention and cannot be overlooked

Project Dominance

Visual dominance is a measure of the Project feature's perceived size relative to other visible landscape features in the viewshed. A Project facility's dominance is determined by its relative location in the viewshed and the distance between the viewer and facility. The level of dominance can range from subordinate to dominant.

View Impairment

View impairment or blockage is a measure of the degree to which Project facilities would obstruct or block views to scenic resources due to the Project's position and/or scale. Blockage of scenic resources or views can cause adverse impacts, especially in instances where scenic resources are essential to the use, value, or function of the land use.

Determination of Impact Significance

The determination of impact significance is based on combined factors of Visual Sensitivity and the Degree of Visual Change that the Project would cause. The relationship between these two overall factors in determining whether adverse visual impacts would be potentially significant is shown in Table 30-2.

[2] The *form* of an object is its visual mass, bulk, or shape. *Line* is introduced by the edges of objects or parts of objects. The *color* of an object is both its value or reflective brightness (light, dark) and its hue (red, green). *Texture* is apparent surface coarseness (FHWA, 1988).

Table 30-2
Visual Impact Significance Summary

Visual Sensitivity	Visual Change				
	Low	**Low to Moderate**	**Moderate**	**Moderate to High**	**High**
Low	Less than Significant	Less than Significant	Less than Significant	Less than Significant	Less than Significant
Low to Moderate	Less than Significant	Less than Significant	Less than Significant	Less than Significant	Potentially Significant
Moderate	Less than Significant	Less than Significant	Less than Significant	Potentially Significant	Potentially Significant
Moderate to High	Less than Significant	Less than Significant	Potentially Significant	Potentially Significant	Potentially Significant
High	Less than Significant	Potentially Significant	Potentially Significant	Potentially Significant	Potentially Significant

Notes:

Less-than-significant impacts are perceived as negative but are considered minor in the context of existing landscape characteristics, and view opportunity.

Potentially significant impacts are perceived as negative and may exceed environmental thresholds depending on Project- and site-specific circumstances. Potentially significant impacts may or may not be able to be reduced to less than significant with implementation of mitigation.

Adapted from Reclamation, Contra Costa Water District, and WAPA, 2009.

30.3.3 Topics Eliminated from Further Analytical Consideration

No Project facilities or topics that are included in the significance criteria listed in Section 30.3.1 were eliminated from further consideration in this chapter.

30.3.4 Impacts Associated with Alternative A

30.3.4.1 Extended Study Area – Alternative A

Construction, Operation, and Maintenance Impacts

Agricultural Water Use, Municipal and Industrial Water Use, and Wildlife Refuge Water Use

Impact Vis-1: A Substantial Adverse Effect on a Scenic Vista

There are scenic vistas located throughout the Extended Study Area; however, there would be no direct Project-related construction or maintenance activities in the Extended Study Area. Therefore, construction of Alternative A would have **no impact** on scenic vistas in this area when compared to the Existing Conditions/No Project/No Action Condition.

Project operational activities would result in improvements to surface water supply reliability for agricultural, municipal, and industrial users, and wildlife refuge water users. However, the improved reliability would not occur at any designated scenic vistas in the Extended Study Area; therefore, there would be **no impact** on scenic vistas when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-2: Substantial Damage to Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway

Although there are State-designated Scenic Highways in the Extended Study Area, because no direct Project-related construction or maintenance activities would occur in the Extended Study Area, construction of Alternative A would have **no impact** on scenic resources within a State Scenic Highway when compared to the Existing Conditions/No Project/No Action Condition.

Project operational activities would result in improvements to surface water supply reliability for agricultural, municipal, and industrial users, and wildlife refuge users in the Extended Study Area; however, these operational changes would not occur within a State-designated Scenic Highway. Therefore, when compared to the Existing Conditions/No Project/No Action Condition, operation of Alternative A, as it relates to agricultural, municipal, and industrial users, and wildlife refuge users in the Extended Study Area, would have **no impact** on scenic resources within a State Scenic Highway.

Impact Vis-3: Substantial Degradation of the Existing Visual Character or Quality of the Site and its Surroundings

No direct Project-related construction or maintenance activities would occur in the Extended Study Area. Therefore, construction of Alternative A would have **no impact** on the visual character or the quality of the site in this area when compared to the Existing Conditions/No Project/No Action Condition.

Project operational activities would result in improvements to surface water supply reliability for agricultural, municipal, and industrial users in the Extended Study Area. Improved water supply reliability would not induce substantial agricultural land use changes or change municipal and industrial water consumption patterns to the degree that would affect visual character or quality of site in the Extended Study Area. Agricultural, municipal, and industrial water use would, therefore, result in **no impact** on the visual character or the quality of the site when compared to the Existing Conditions/ No Project/No Action Condition.

The wildlife refuges that would receive Level 4 water supplies under the CVP and SWP operations associated with the Existing Conditions/No Project/No Action Condition would receive the same amount of supply with implementation of Alternative A; however, the source of a portion of the supply would change. Therefore, because of the 2008 USFWS biological opinion and the 2009 NMFS biological opinion, and the impacts those had on the operations of the SWP and CVP, implementation of Alternative A would result in **no impact** or a **beneficial impact** on the visual character and quality of the wildlife refuges in the Extended Study Area when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-4: A New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area

No direct Project-related construction or maintenance activities would occur in the Extended Study Area, resulting in no new sources of artificial light; therefore, construction of Alternative A would have **no impact** on daytime or nighttime views in this area when compared to the Existing Conditions/No Project/No Action Condition.

Project operational activities, as they relate to agricultural, municipal, and industrial users and wildlife refuge users in the Extended Study Area and the San Luis Reservoir, would not result in a new source of

light or glare. Therefore, operation of Alternative A would have **no impact** on daytime or nighttime views when compared to the Existing Conditions/No Project/No Action Condition.

San Luis Reservoir and Other Reservoirs

Impact Vis-1: A Substantial Adverse Effect on a Scenic Vista

There are scenic vistas located throughout the Extended Study Area; however, there would be no direct Project-related construction or maintenance activities in the Extended Study Area. Therefore, construction of Alternative A would have **no impact** on scenic vistas in this area when compared to the Existing Conditions/No Project/No Action Condition.

Project operational activities would result in fluctuations at San Luis Reservoir; however, these would be within the historical range. Additionally, San Luis Reservoir is not a designated scenic vista, and other reservoirs on the California Aqueduct are not operated in response to allocations or San Luis Reservoir operating conditions; therefore, there would be **no impact** on scenic vistas when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-2: Substantial Damage to Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway

State Designated Scenic Highway 152 follows the northern shore of San Luis Reservoir for approximately 6 miles. However, because no construction would occur at San Luis or any other reservoir, and projected reservoir water levels associated with operation of Alternative A would remain within the historical range, there would be a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-3: Substantial Degradation of the Existing Visual Character or Quality of the Site and its Surroundings

No direct Project-related construction or maintenance activities would occur in the Extended Study Area. Therefore, construction of Alternative A would have **no impact** on the visual character or the quality of the site in this area when compared to the Existing Conditions/No Project/No Action Condition.

Implementation of Alternative A would result in direct Project-related operational effects at San Luis Reservoir. Seasonal drawdown of San Luis Reservoir during some water year types is expected to occur with implementation of Alternative A when compared to the Existing Conditions/No Project/No Action Condition; however, projected levels would not be outside of the historical range. This would, therefore, be a **less-than-significant impact** on the visual character of San Luis Reservoir when compared to the Existing Conditions/No Project/No Action Condition.

All other reservoirs on the California Aqueduct are operated in a narrow range to re-regulate the flows in the canals and to provide emergency storage if there is a failure in the conveyance system. These reservoirs are not operated in response to allocations or San Luis Reservoir operating conditions. There would, therefore, be **no impact** on the visual character or quality of California reservoirs in the Extended Study Area when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-4: A New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area

No direct Project-related construction or maintenance activities would occur in the Extended Study Area, resulting in no new sources of artificial light; therefore, construction of Alternative A would have **no impact** on daytime or nighttime views in this area when compared to the Existing Conditions/No Project/No Action Condition.

Project effects on San Luis Reservoir operation, as well as the operation of other reservoirs in California, would not require the installation of new sources of light or glare; therefore, there would be **no impact** on daytime or nighttime views in the area when compared to the Existing Conditions/No Project/No Action Condition.

30.3.4.2 Secondary Study Area – Alternative A

Construction, Operation, and Maintenance Impacts

Trinity Lake, Lewiston Lake, Trinity River, Klamath River Downstream of the Trinity River, Whiskeytown Lake, Spring Creek, Shasta Lake, Sacramento River, Keswick Reservoir, Clear Creek, Lake Oroville, Thermalito Complex (Thermalito Diversion Pool, Thermalito Forebay, and Thermalito Afterbay), Feather River, Sutter Bypass, Yolo Bypass, Folsom Lake, Lake Natoma, American River, Sacramento-San Joaquin Delta, Suisun Bay, San Pablo Bay, and San Francisco Bay

Impact Vis-1: A Substantial Adverse Effect on a Scenic Vista

There are scenic vistas located throughout the Secondary Study Area; however, no direct Project-related construction or maintenance activities would occur in the Secondary Study Area water bodies listed above. Therefore, construction of Alternative A would have **no impact** on scenic vistas in this area when compared to the Existing Conditions/No Project/No Action Condition.

Operationally, Alternative A would also result in some changes in flows within rivers and creeks within the Secondary Study Area. However, these changes would not be outside of the historical range for the system, so should the increase occur at any designated scenic vistas in the Secondary Study Area, it would not be visibly obvious to residents, recreationists, or motorists in the vicinity of these water bodies; therefore, there would be **no impact** on scenic vistas when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-2: Substantial Damage to Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway

There are approximately 76 miles of State-designated Scenic Highways located in the Secondary Study Area, adjacent to Shasta Lake, the Sacramento River, the Sacramento-San Joaquin Delta, and the San Francisco Bay. However, because no construction would occur at these facilities, and projected water levels associated with operation of Alternative A would remain within the historical range, there would be a **less-than-significant impact** on scenic resources within a State Scenic Highway when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-3: Substantial Degradation of the Existing Visual Character or Quality of the Site and its Surroundings

No direct Project-related construction or maintenance activities would occur in the Secondary Study Area water bodies listed above; therefore, construction of Alternative A would have **no impact** on scenic vistas in this area when compared to the Existing Conditions/No Project/No Action Condition.

Operationally, Alternative A would result in some changes in flows within rivers and creeks within the Secondary Study Area. The overall increase in flows and storage, however, would not be outside of the historical range for the system, and would, therefore, not be visibly obvious to residents, recreationists, or motorists in the vicinity of these water bodies. There would, therefore, be **no impact** on the visual character and quality of the water bodies in the Secondary Study Area when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-4: A New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area

No direct Project-related construction or maintenance activities would occur at the water bodies listed above, resulting in no new sources of artificial light; therefore, construction of Alternative A would have **no impact** on daytime or nighttime views in the Secondary Study Area when compared to the Existing Conditions/No Project/No Action Condition.

Project effects on the water bodies in the Secondary Study Area would not require the installation of new sources of light or glare; therefore, there would be **no impact** on daytime or nighttime views in the area when compared to the Existing Conditions/No Project/No Action Condition.

Pump Installation at the Red Bluff Pumping Plant

Impact Vis-1: A Substantial Adverse Effect on a Scenic Vista

There are no officially designated scenic vistas located at the RBPP; therefore, implementation of Alternative A would have **no impact** on scenic vistas at the RBPP when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-2: Substantial Damage to Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway

There are no State Scenic Highways within the vicinity of the RBPP; therefore, there would be **no impact** on scenic resources within a State-designated Scenic Highway at this location.

Impact Vis-3: Substantial Degradation of the Existing Visual Character or Quality of the Site and its Surroundings

The only direct Project-related construction that would occur in the Secondary Study Area is related to the installation of two additional pumps at the RBPP. The existing visual character at the point of the Sacramento River where the RBPP is located appears industrially developed. The construction of an additional pump within an existing concrete bay and pump house, followed by its operation and maintenance, would not substantially degrade the visual character of the area, nor would it impair the existing viewshed around the RBPP. Additionally, although the Tehama County General Plan considers the Sacramento River to be a scenic resource, the pump installation and operation would not be inconsistent with General Plan Policy OS-11.4, which states that “new development should be designed

to be compatible with surrounding development in ways that contribute to the desired character of the surrounding area" (Tehama County, 2009). There would, therefore, be a **less-than-significant impact** on the visual character and quality of the RBPP when compared to the Existing Conditions/No Project/No Action Condition.

The only direct Project-related maintenance activity that would occur in the Secondary Study Area is the sediment removal and disposal at the RBPP. The existing visual character would not be degraded by increasing the frequency and intensity of dredging at the RBPP. Additionally, there are no Tehama County General Plan policies that would be relevant to the maintenance of the RBPP. There would, therefore, be a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-4: A New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area

Pump installation at the RBPP would not result in any new sources of artificial light, and would not be inconsistent with Tehama County General Plan Policy OS-11.4a, which states that "new development shall include provisions for the design of outdoor light fixtures to be directed/shielded downward and screened to avoid adverse night-time lighting spill-over effects on adjacent land uses and night-time sky glow conditions" (Tehama County, 2009). Therefore, construction of Alternative A would have **no impact** on day or nighttime views in this area when compared to the Existing Conditions/No Project/No Action Condition.

Sediment removal at the RBPP would not require the installation of new sources of substantial light or glare. Maintenance vehicles could be a temporary source of reflective daytime glare and may require the use of some artificial lighting during early morning and evening dredging, which would likely occur more frequently than under the Existing Conditions/No Project/No Action Condition; however, this impact would be temporary and visible only in the immediate vicinity of the facilities where no sensitive receptors are located. Therefore, implementation of Alternative A would result in a **less-than-significant impact** on daytime and nighttime views at the RBPP when compared to the Existing Conditions/No Project/No Action Condition.

30.3.4.3 Primary Study Area – Alternative A

Construction, Operation, and Maintenance Impacts

Sites Reservoir Complex

Impact Vis-1: A Substantial Adverse Effect on a Scenic Vista

There are no officially designated scenic vista points in Colusa County or Glenn County, and the proposed facilities located within the Sites Reservoir Complex would not be inconsistent with the Colusa County 2030 General Plan or the Glenn County General Plan (Colusa County, 2012; Glenn County, 1993). Therefore, there would be **no impact** on scenic vistas in this area when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-2: Substantial Damage to Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway

There are no State-designated Scenic Highways in Colusa County or Glenn County; therefore, the proposed facilities located within the Sites Reservoir Complex would have **no impact** on scenic resources within a State Scenic Highway when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-3: Substantial Degradation of the Existing Visual Character or Quality of the Site and its Surroundings

Construction of Alternative A at the Sites Reservoir Complex would require the demolition of all structures, including houses, barns, sheds, shops, and other auxiliary structures within the footprints and buffers of the proposed inundation area and at proposed facilities. Construction would also require the grading and removal of vegetation and several large rock formations for construction of the nine dams, three recreation areas, and additional facilities within the proposed Sites Reservoir Complex, including the Inlet/Outlet Structures, Pumping/Generating Plant, public access roads, restrooms, and campsites. Although Project-related changes to the landscape could become less visible over time, vegetation removal activities would degrade existing scenic views of the valley floor, hilly grasslands, and rocky outcrops. These changes would be visible during construction, which would occur over several years; however, public views of the construction activities, materials, and equipment would be partially obstructed by the terrain and limited to motorists on portions of Lurline Road, Huffmaster Road, and Eastside Road.

Construction of the facilities would occur over several years, during which time the visual character of the area would be temporarily degraded due to the presence of construction equipment, materials, and workers; removal of vegetation; and generation of dust within the Project footprint; nevertheless, the area would remain of moderate visual quality for the following reasons: 1) the remaining open grasslands within the inundation area would remain largely intact, 2) the proposed earthfill embankment dams would be constructed primarily of excavated onsite soil and rock, 3) the natural character of the Recreation Areas would be generally maintained, and 4) public access to remaining proposed facilities during construction would be prohibited. Therefore, although the construction of the Sites Reservoir Complex, including the inundation area and several new dams and buildings, would be a moderate visual change, the temporary nature of the construction at any one area and the limited extent of visibility of these Project facilities would be minimal and would thus result in a **less-than-significant impact** on the existing visual character when compared to the Existing Conditions/No Project/No Action Condition.

The initial filling of the reservoir would occur over several years, during which time the area would transition from open grasslands to a deepening inundated reservoir that may attract birds and other regional riparian species. During this time, the inundation area would be of moderate to high visual quality. Upon completion of the initial filling of the reservoir, however, the full Sites Reservoir would have the appearance of a large lake during Normal to Wet years and would be of high visual quality; therefore, the initial filling and operation of Sites Reservoir would have a **less-than-significant impact** on the visual character and quality at the Sites Reservoir Complex during Normal to Wet years when compared to the Existing Conditions/No Project/No Action Condition. During Dry to Critical years and in some summer months, the reservoir water supply would be drawn down to meet Project objectives, resulting in the shores and reaches of the inundation area being unvegetated and having the appearance of a “bathtub ring.” This would temporarily deteriorate the inundation area and recreation areas to a low to

moderate visual quality for motorists on the proposed South Bridge and relocated road system, and for recreationists at the proposed recreation areas located around the reservoir. However, despite the potential for the "bathtub ring" effect to occur during Dry and Critical water year types typical of many large-scale reservoirs, given that the proposed Sites Reservoir would provide a visually appealing landscape feature that does not currently exist at the site, this would result in a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Although the dams would be large features, the earthen materials and the proposed dams would generate low visual contrast for viewers while in operation, and would be visually subordinate to the proposed reservoir and its surroundings. The overall visual change would be low to moderate, and views of the proposed dams would be largely obstructed due to the area's terrain and limited in duration to motorists on the relocated roads. Therefore, operation of dams associated with Alternative A would result in a **less-than-significant impact** on the visual character and quality at the proposed Sites Reservoir Complex when compared to the Existing Conditions/No Project/No Action Condition.

Operation and maintenance of the proposed Recreation Areas would offer new recreation opportunities in scenic lakeside and island settings consistent with the Colusa County General Plan, and create viewing opportunities that do not exist. During Above Normal and Wet years, the aesthetic quality of the proposed Sites Reservoir and its surroundings would be high and result in a **beneficial effect** on the visual character and quality of the proposed Recreation Areas due to increased access to high-quality views. During Dry to Critical years, drawdown of the reservoir could begin in early spring and continue through late summer. During this substantial reservoir drawdown, the shores along the proposed reservoir would be unvegetated and temporarily degraded to a lower visual quality, but no change to the visual quality of the Recreation Areas would occur. Although the visiting recreationists would be considered sensitive receptors, the overall visual change would be low. Therefore, when compared to the Existing Conditions/No Project/No Action Condition, this would result in a **less-than-significant impact**.

During Project operations and maintenance, several of the proposed facilities, including the Site Reservoir Inlet/Outlet Structure and all tunnels and pipelines, would be underground or underwater features and, therefore, would not be visible. As a result, operations of these facilities associated with the Sites Reservoir Complex under Alternative A would have a **less-than-significant impact** on the visual quality of the area when compared to the Existing Conditions/No Project/No Action Condition. Operation and maintenance activities at aboveground facilities would include inspections and repairs, and would occur periodically throughout the life of the Project. They would typically be activities of short duration, requiring few vehicles, equipment, and personnel, resulting in a **less-than-significant impact** on the visual character and quality of the site when compared to the Existing Conditions/No Project/No Action Condition.

Once operating, the South Bridge would be approximately 1.5 miles long, and its deck would be 45 feet above the reservoir's maximum water surface elevation. The bridge would be visually dominant and create moderate to high visual contrast to viewers relative to viewpoint, due to its form, the introduction of a new line to the landscape, and a change in the landscape's texture and color from the Existing Conditions/No Project/No Action Condition. The South Bridge would also introduce urban infrastructure in an area that is largely characterized by its rural and undeveloped open space. This may cause it to be perceived as lacking harmony and cohesiveness within the existing setting and alongside other Project facilities included in Alternative A. Sensitive receptors with a view of the South Bridge would include recreationists from the proposed Stone Corral Recreation Area, and motorists on and approaching the South Bridge; these would be introduced sensitive receptors that would not likely visit the site location

were it not for the introduction of the proposed facilities. Therefore, although introduction of the proposed South Bridge would create a visual change in this location when compared to the surrounding landscape and the Existing Conditions/No Project/No Action Condition, it is anticipated that this would be a **less-than-significant impact** on the visual character of the area.

Alternative A would require the construction of approximately 44 miles of new public access roads and improvements to several existing paved and gravel roads. During operation of Alternative A, views of the new roadways would generally be seen at a shallow viewing angle, would appear similar to other county roads in the region, and would therefore be of low visual contrast. Additionally, the road relocations would neither permanently block nor impair views of surrounding landscape, and sensitive receptors with views of the proposed roads would generally be limited to motorists using these roads; therefore, the proposed road relocations would result in a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Colusa County 2030 General Plan Policy CC 1-15 requires that the rural landscape be preserved and enhanced as an important scenic feature of the County. In addition, Policy OSR 1-5 states that "new development should be designed and constructed to preserve open space features such as scenic corridors, wetlands, riparian vegetation, native vegetation, trees and natural resource areas where feasible and appropriate" (Colusa County, 2012). The proposed Sites Reservoir and associated facilities would not be inconsistent with this policy, as it would continue to provide an open space, as well as a visually appealing water feature and scenic area that would otherwise not exist at this location. Therefore, when compared to the Existing Conditions/No Project/No Action Condition, the Sites Reservoir Complex associated with Alternative A would result in a **less-than-significant impact** on the visual character of the area.

Impact Vis-4: A New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area

Construction of the facilities within the Sites Reservoir Complex would create new, temporary sources of reflective daytime and nighttime glare. Building materials used to construct the facilities, facility structures, roadways, and roadway fixtures may have the potential to be reflective under natural and artificial light. Construction equipment and vehicles could also be a temporary source of reflective daytime glare and nighttime light, and construction activities during early morning and evening hours would require the use of vehicle and perimeter lighting. However, no residences would have direct views of the construction sites, and motorists would have only brief views of some of the construction areas from the relocated roads as they pass. Additionally, construction would be temporary, and views of the construction sites would be largely obstructed due to the area's terrain. Therefore, new sources of light or glare due to Project construction at the Sites Reservoir Complex would result in a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

The permanent conversion of a vegetated landscape to a 1.3 MAF reservoir would introduce a new potential source of daytime and nighttime glare in the area, as well as the potential for new sources of light and glare from the introduction of recreational uses in and around the reservoir, including artificial lighting from boating activities and nighttime safety lighting. Operation and maintenance of the facilities within the Sites Reservoir Complex would require new sources of permanent access and safety lighting; however, these would not be highly visible sources of artificial lighting, which would be inconsistent with Colusa County General Plan Policy OSR 1-14 and Glenn County General Plan Policy NRP-86. The overall visual change would be moderate. Residences would not be located within direct view of the

reservoir due to the Project Buffer, and views of the proposed facilities and their associated operations and maintenance activities and any permanent lighting installed would be largely obstructed due to the area's terrain and lack of public access. Views would be limited to motorists on the relocated roads, who would see the facilities only briefly as they pass. For these reasons, this would be a **less-than-significant impact** on daytime and nighttime views in the area when compared to the Existing Conditions/No Project/No Action Condition

Holthouse Reservoir Complex

Impact Vis-1: A Substantial Adverse Effect on a Scenic Vista

There are no officially designated scenic vista points in Colusa County, and the proposed facilities within the Holthouse Reservoir Complex would not be inconsistent with the Colusa County 2030 General Plan (Colusa County, 2012). Therefore, implementation of Alternative A would have **no impact** on scenic vistas when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-2: Substantial Damage to Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway

There are no State-designated Scenic Highways in Colusa County; therefore, the proposed facilities located within the Holthouse Reservoir Complex would have **no impact** on scenic resources within a State Scenic Highway when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-3: Substantial Degradation of the Existing Visual Character or Quality of the Site and its Surroundings

Construction of the Holthouse Reservoir Complex would require an expansion of the surface area of the existing Funks Reservoir from 232 acres to 450 acres, as well as the construction of an emergency Spillway, Stilling Basin, Spillway Bridge, and an earthen approach to the Sites Pumping/Generating Plant, and the relocation of a WAPA transmission Line. The remaining facilities located within the proposed Holthouse Reservoir Complex would be constructed within the footprint of existing facilities at Funks Reservoir. During construction of the facilities, the visual character of the area would be temporarily degraded due to the presence of construction equipment, materials, and workers; removal of vegetation; and generation of dust within the Project footprint; however, the area would remain of moderate visual quality, and views of the construction activities, materials, and equipment would be limited to motorists on Maxwell Sites Road. The views would be largely obstructed due to distance and terrain; therefore, construction of the Holthouse Reservoir Complex is anticipated to be a **less-than-significant impact** on the existing visual quality of the area when compared to the Existing Conditions/No Project/No Action Condition.

Once the Holthouse Reservoir is operational, viewers may perceive the reservoir as having high visual quality. The facilities associated would be of a low to moderate visual quality, although these types of structures are characteristic of this agricultural region. Motorists along Eastside Road would experience brief views of Holthouse Pumping Plant and its associated facilities; however, these views would brief and largely obstructed due to terrain. Maintenance activities at Holthouse Reservoir facilities, including the Holthouse Pumping Plant, would include inspections and repairs, and would occur periodically throughout the life of the Project; however, they would typically be activities of short duration, requiring few vehicles, equipment, and personnel. Therefore, operation and maintenance of the Holthouse

Reservoir Complex is anticipated to be a **less-than-significant impact** on the existing visual quality of the area when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-4: A New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area

The permanent conversion of a vegetated landscape to expand the existing Funks Reservoir would increase a potential source of daytime and nighttime glare in the area. Additionally, construction of the Project facilities associated with the Holthouse Reservoir Complex would create new temporary sources of reflective daytime glare and nighttime lighting. Building materials used to construct the Holthouse Pumping Plant may have the potential to be reflective under natural and artificial light. Furthermore, construction equipment and vehicles could also be a temporary source of reflective daytime glare and nighttime light. Construction activities during early morning and evening hours would require the use of vehicle and perimeter lighting. However, no residences would have direct views of the construction sites, and motorists would have only brief views of some of the construction areas from the Eastside Road as they pass. Additionally, construction would be temporary, and views of the construction sites would be largely obstructed due to the area's terrain. Therefore, new sources of light or glare due to Project construction at the Holthouse Reservoir Complex would result in a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Operation and maintenance of the facilities would also require new sources of permanent access and safety lighting; however, these would not be highly visible sources of artificial lighting, which would be inconsistent with Colusa County General Plan Policy OSR 1-14, and Glenn County General Plan Policy NRP-86. The overall visual change would be moderate, residences would not be located within direct view of the reservoir due to the Project Buffer, and views of the proposed facilities and their associated operations and maintenance activities and any permanent lighting installed would be largely obstructed, due to the area's terrain and lack of public access. Visual change would be limited to motorists on the Eastside Road, who would see the facilities only briefly as they pass. Maintenance activities at Holthouse Reservoir facilities would include inspections and repairs that would occur periodically throughout the life of the Project and could result in the need for potentially glare-emitting construction vehicles and equipment, as well as the potential need for access and safety lighting; however, maintenance activities would typically be of short duration, requiring few vehicles, equipment, and personnel. As a result, operation and maintenance of the Holthouse Reservoir Complex would result in a **less-than-significant impact** on daytime and nighttime views in the area when compared to the Existing Conditions/No Project/No Action Condition.

Terminal Regulating Reservoir Complex

Impact Vis-1: A Substantial Adverse Effect on a Scenic Vista

There are no officially designated scenic vista points in Colusa County, and the proposed TRR and its associated facilities would not be inconsistent with the Colusa County 2030 General Plan (Colusa County, 2012). Therefore, implementation of Alternative A would have **no impact** on scenic vistas when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-2: Substantial Damage to Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway

There are no State-designated Scenic Highways in Colusa County; therefore, the proposed facilities located within the TRR Complex would have **no impact** on scenic resources within a State Scenic Highway when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-3: Substantial Degradation of the Existing Visual Character or Quality of the Site and its Surroundings

Construction of the TRR, its associated facilities, and the GCID Main Canal Connection would create temporary changes in the views of and from the Project area. Construction activities would introduce heavy equipment and associated vehicles, including cranes, scrapers, excavators, and graders, into the viewshed of residents and motorists near the Project work site. Views from adjacent residents and roads of scenic undeveloped hills to the west would have the potential to be temporarily impaired by construction equipment, vehicles, workers, and materials. Residents located along Maxwell Sites Road, Delevan Road, Sutton Road, and McDermott Road would see a large number of construction vehicles driving within their viewsheds during the construction phase of these Project facilities. However, given the continual presence of tractors, trucks, and other equipment used in agriculture in the area, although of differing types and intensity, viewers are not likely to be sensitive to the presence of construction equipment. The temporary nature of the construction of the TRR and its associated facilities, as well as the limited number of residences, construction of the TRR Complex is anticipated to have a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Once operational, the TRR and its associated facilities would span approximately 200 acres of existing agricultural land and would be constructed approximately 6 feet above the existing ground surface on the valley floor, adjacent to the GCID Main Canal, using a combination of excavation and embankment. This would create a moderate to high visual contrast when compared to Existing Conditions due to the TRR's scale and designed height. There is also minimal topographic variation and absence of large water features within this area, making the new water body distinct to the area, which is characterized by agricultural fields, rural residences, and several small water storage facilities and water conveyance systems. Some of the proposed TRR-associated facilities would have the potential to degrade the moderate visual quality of the area although views from adjacent residents and roads of scenic undeveloped hills to the west would have limited potential to be obstructed during operations depending on their distance from the proposed facilities and viewing angle. The TRR would introduce a substantial and distinct change from its existing use, including the potential to be inconsistent with Colusa County 2030 General Plan Policy OSR 1-12 (Colusa County, 2012); however, based on the limited number of sensitive receptors in the area, the proposed TRR Complex, including the TRR, its associated facilities, and the GCID Main Canal Connection, would result in a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

The existing visual character at the GCID Main Canal facilities is highly developed, and maintenance activities in and around the facility are common. Increasing the frequency or intensity of dredging at the GCID Main Canal Intake would not substantially degrade the existing visual quality of the site. Additionally, there are no Glenn County General Plan policies that would be relevant to the maintenance of the GCID Main Canal Intake. There would, therefore, be a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-4: A New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area

Construction of the Project facilities associated with the TRR Complex would create new temporary sources of reflective daytime glare and nighttime lighting, and building materials used to construct the TRR Pumping/Generating Plant and Electrical Switchyard may have the potential to be reflective under natural and artificial light, and construction equipment and vehicles and perimeter lighting could also be a temporary source of reflective daytime glare and nighttime light. However, given the temporary nature of construction and the limited number of nearby residences, the impact on daytime and nighttime views is considered **less-than-significant** when compared to the Existing Conditions/No Project/No Action Condition.

Approximately 200 acres of agricultural land would be permanently converted to a regulating reservoir, which would provide a new source of daytime glare, both when filled and when not entirely filled due to exposed shoreline, for low flying aircraft and limited nearby residences with second stories or on raised parcels, because the facility would be located 6 feet above average ground surface elevation at the site. In addition, operation and maintenance of the facilities would require new sources of permanent access and safety lighting; however, these would not be highly visible sources of artificial lighting, which would be inconsistent with Colusa County General Plan Policy OSR 1-14 and Glenn County General Plan Policy NRP-86. Therefore, the visual change in sources of light and glare would be low, resulting in a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Delevan Pipeline Complex

Impact Vis-1: A Substantial Adverse Effect on a Scenic Vista

There are no officially designated scenic vistas in Colusa County, and the proposed Delevan Pipeline and the associated facilities within the Delevan Pipeline Complex would not be inconsistent with scenic and visual resource objectives contained in the Colusa County 2030 General Plan (Colusa County, 2012). Therefore, implementation of Alternative A would have **no impact** when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-2: Substantial Damage to Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway

There are no State-designated Scenic Highways in Colusa County; therefore, the proposed facilities located within the Delevan Pipeline Complex would have **no impact** on scenic resources within a State Scenic Highway when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-3: Substantial Degradation of the Existing Visual Character or Quality of the Site and its Surroundings

Construction of the Delevan Pipeline would require a temporary 300-foot construction easement, along the length of the 10.5-mile pipeline. No residences would be located directly within the approximately 500-acres of temporary construction easements, which are predominantly used for agricultural purposes and would not be available for use during construction, although a limited number of residences would be located adjacent to the easement. Although agricultural land and open space are considered scenic resources according to the Colusa County 2030 General Plan, the temporary inability to use lands within the construction easement would not substantially degrade existing visual character or quality. Therefore,

construction of the Delevan Pipeline would result in a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Although much of the Sacramento River is generally considered to be a scenic vista, public views of the proposed Delevan Pipeline Intake/Discharge Facilities, Fish Screen, and Forebay during operation and maintenance would be obstructed on the west by the levee and privately owned orchards. On the east side of the river, public views would be obstructed by stands of mature trees and vegetation, beyond which is private agricultural development; in addition, public access to the east river bank is not legally permitted in the vicinity of the proposed facility location. Public views of the proposed facilities would be available from the river. The Delevan Pipeline Intake/Discharge Facilities would result in a moderate visual change from the existing undeveloped riverbank. Due to the lack of visibility of the facility location from land, the lack of public access in the vicinity of the proposed facilities, and the expected few viewers of the facilities from the river, the Delevan Pipeline Intake/Discharge Facilities would result in a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Following Project completion, some of the disturbed agricultural land used for temporary construction staging would be restored to pre-Project conditions, as feasible, with the exception of a reduced easement and limited number of blow-off structures, air valve structures, and outlet and energy dissipater structures. Due to the lack of public access in the vicinity of the proposed facilities, the limited number of residences adjacent to the pipeline, and the expected few viewers of the facilities from the river, the proposed Delevan Pipeline Complex would not be inconsistent with Colusa County 2030 General Plan Policy OSR 1-12, requiring that visually intrusive development near scenic resources be limited to minimize visual impacts. Therefore, implementation of the Delevan Pipeline Complex under Alternative A would result in a **less-than-significant impact** on the existing visual quality of the agricultural surroundings when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-4: A New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area

Neither construction nor operation of the Delevan Pipeline would require installation of structures that would permanently emit light or glare. Therefore, the proposed Delevan Pipeline would not be inconsistent with General Plan Policy OSR 1-14, and construction, operation, and maintenance of the Delevan Pipeline would result in a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Construction of the Delevan Pipeline Intake/Discharge and associated facilities would introduce new temporary sources of reflective daytime glare and nighttime lighting. Construction equipment and vehicles could be a temporary source of reflective daytime glare. Materials used to construct the fish screen and pumping/generating plant may have the potential to be reflective under natural and artificial light. Construction activities during early morning and evening hours would require the use of lighting. Due to the location of existing orchards and mature trees, and vegetation between residences and the proposed facilities, views of construction equipment and vehicles would be largely obstructed, with the exception of recreationists on the Sacramento River; therefore, impacts on daytime and nighttime views at the Delevan Pipeline Intake/Discharge Facilities, as a result of new sources of light and glare, would be a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Operation and maintenance of the facilities may require new sources of permanent safety lighting; however, these would not be highly visible sources of artificial lighting, which would be inconsistent with Colusa County General Plan Policy OSR 1-14, and Glenn County General Plan Policy NRP-86. Visual change in sources of light and glare would be moderate due to limited public views of the proposed facility location. Therefore, the visual change in sources of light and glare would be low when viewed by residents located in the vicinity of the proposed facilities, which would result in the Delevan Pipeline Complex having a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Overhead Power Lines and Substations

Impact Vis-1: A Substantial Adverse Effect on a Scenic Vista

There are no officially designated scenic vistas in Colusa County, and the proposed Sites/Delevan Overhead Power Line and Distributions Lines would not be inconsistent with scenic and visual resource objectives contained in the Colusa County 2030 General Plan (Colusa County, 2012). Therefore, implementation of Alternative A would have **no impact** on scenic vistas when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-2: Substantial Damage to Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway

There are no State-designated Scenic Highways in Colusa County. Therefore, construction, operation, and maintenance of the proposed Transmission Lines and Distributions Lines would result in **no impact** on scenic resources within a State Scenic Highway when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-3: Substantial Degradation of the Existing Visual Character or Quality of the Site and its Surroundings

Because of the lack of topography and mature vegetation along the alignment, construction of the Sites/Delevan Transmission Line would be moderately to highly visible by passing motorists and residents at approximately 30 residences within 1 mile of the proposed alignment. Residences are typically considered to have high viewer sensitivity, and construction of these transmission lines would create temporary changes in the views from nearby residences, as well as the views motorists traveling to and from the construction work site would encounter. Construction activities would introduce heavy equipment and associated vehicles into the viewshed of the proposed transmission line alignment. However, because the area is subject to the continual presence of large agricultural equipment, the presence of construction equipment would not be out of place within the viewed landscape. Construction of the Sites/Delevan Overhead Power Line would, therefore, result in a **less-than-significant impact** on scenic vistas when compared to the Existing Conditions/No Project/No Action Condition.

There are several existing transmission lines and towers that traverse the flat agricultural land of Colusa County; therefore, new transmission lines, particularly ones that would connect to or generally parallel existing transmission lines, would not be incompatible with the existing landscape, and would generate a low to moderate degree of visual change that would be viewed by residents and motorists. Although the viewing sensitivity of these viewers is high and moderate, respectively, the presence of a second transmission line would not substantially impair or dominate the views seen by these viewers. Part of the Sites/Delevan Overhead Power Line would be aligned approximately 200 yards north of the northern

boundary of the Delevan NWR; however, public views of this Transmission Line would be obstructed by mature trees demarking the refuge boundary. The Sites/Delevan Overhead Power Line would terminate near the western bank of the Sacramento River, at the Delevan Pipeline Intake/Discharge Facility. The Overhead Power Line would not be visible from the Sacramento River because views from the river to the west are blocked by the levee system and orchards. The remainder of the Sites/Delevan Overhead Power Line, as well as the other transmission lines, would be aligned over agricultural land, and their permanent impact would be limited to the support poles, which would not degrade the visual character of the agricultural area. Periodic operational and maintenance activities would consist of inspections of the transmission lines by inspectors via truck and repairs, as necessary. These operation and maintenance activities would be temporarily seen by motorists and residents but would not substantially impair or dominate views. The operation and maintenance of the proposed transmission lines would, therefore, be a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-4: A New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area

Construction of the Sites/Delevan and other transmission lines may introduce new temporary sources of reflective daytime glare and nighttime lighting. Construction equipment and vehicles could be a temporary source of reflective daytime glare. Materials used to construct the transmission towers and line may have the potential to be reflective under natural and artificial light. Construction activities during early morning and evening hours would require the use of lighting. These activities and equipment would result in a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

Although unlikely, operation of the proposed transmission line may require permanent safety lighting; however, it is anticipated that sources of light would result only from maintenance activities, which would be temporary and brief. As a result, visual change in sources of light and glare would be low to moderate due to the spacing of the transmission poles. Because of the viewing angle, distance, and limited number of residents and motorists in the vicinity of the proposed transmission, implementation of Alternative A would have a **less-than-significant impact** on light or glare when compared to the Existing Conditions/No Project/No Action Condition.

Project Buffer

Impact Vis-1: A Substantial Adverse Effect on a Scenic Vista

There are no officially designated scenic vistas in Glenn County or Colusa County, and the presence of the Project Buffer would not be inconsistent with scenic and visual resource objectives contained in the Colusa County 2030 General Plan or the Glenn County General Plan (Colusa County, 2012; Glenn County, 1993). Therefore, implementation of Alternative A would have **no impact** on scenic vistas at the when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-2: Substantial Damage to Scenic Resources, Including, but Not Limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway

There are no State-designated Scenic Highways in Glenn County or Colusa County. Therefore, the Project Buffer and its associated fuel break maintenance activities and fence would result in **no impact** on scenic

resources within a State Scenic Highway when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-3: Substantial Degradation of the Existing Visual Character or Quality of the Site and its Surroundings

Construction of Alternative A would require the removal of vegetation to create a fuel break; the demolition of several structures, including houses, barns, shops, and sheds that are located within the Project Buffer but outside of the associated Project facility footprints; and the installation of a fence. These construction and demolition activities would introduce construction vehicles and workers into the landscape around each of the Project facilities. These activities would last only a short time at each Project facility and would not substantially degrade the visual character or quality of that area, resulting in a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

The presence of the three-strand barbed-wire fence Project Buffer would not substantially degrade the visual character or quality of that area, nor would the periodic fuel break and fence maintenance that would occur within this area. Therefore, the presence of the Project Buffer and the associated fuel break and fence maintenance would not be inconsistent with the General Plan policies of Colusa County and Glenn County, resulting in a **less-than-significant impact** during Project operation and maintenance when compared to the Existing Conditions/No Project/No Action Condition.

Impact Vis-4: A New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area

Removal of vegetation to create a fuel break, the demolition of several structures, and fence construction could introduce daytime glare in the landscape from Project construction vehicles and/or equipment. This source of potential glare would be mobile, as activities progress around the Project facilities, and is not expected to be in any given location for an extended period of time. If these activities were to occur at night, construction lighting would be used, which could affect nighttime views in the area. Because potential light and glare impacts would be in any given location for only a short period of time and many of the Project facilities would be located in areas that are not readily visible to residents, and would be visible to motorists for only short periods of time, this is considered a **less-than-significant impact** when compared to the Existing Conditions/No Project/No Action Condition.

The presence of the Project Buffer fence and the periodic fuel break and fence maintenance activities that would occur are not expected to emit glare during the daytime, and the fence would not be lit at night. Therefore, operation of the Project Buffer would not be inconsistent with the General Plan policies of Colusa County and Glenn County, and **no impact** would occur during Project operation and maintenance when compared to the Existing Conditions/No Project/No Action Condition.

30.3.5 Impacts Associated with Alternative B

30.3.5.1 Extended and Secondary Study Areas – Alternative B

Construction, Operation, and Maintenance Impacts

The impacts associated with Alternative B, as they relate to scenic vistas (**Impact Vis-1**), scenic resources within a State Scenic Highway (**Impact Vis-2**), visual character or quality of a site and its surroundings

(**Impact Vis-3**), and a new source of light or glare (**Impact Vis-4**) would be the same as described for Alternative A for the Extended and Secondary study areas.

30.3.5.2 Primary Study Area – Alternative B

Construction, Operation, and Maintenance Impacts

Many of the same Project facilities are included in both Alternatives A and B (see Chapter 3 Description of the Sites Reservoir Project Alternatives, Table 3-1) and would result in similar alterations of the visual landscape once constructed. These facilities would require the same construction methods, and operations and maintenance activities regardless of alternative, and would therefore result in the same construction, operation, and maintenance impacts on visual resources. Therefore, unless explicitly discussed, impacts on all Project facilities are anticipated to be the same as those for Alternative A.

Sites Reservoir Complex

If Alternative B is implemented, the footprints and construction disturbance areas of Sites Reservoir and Dams, and the Road Relocations and South Bridge would differ from those described for Alternative A. If Alternative B is implemented, the Sites Reservoir Inundation Area would increase to a 1.8-MAF storage capacity. The boundary of the larger reservoir would range from less than 100 feet wider in some areas to several thousand feet larger in others when compared to that of the Alternative A reservoir, depending on the existing slope of the terrain. The 1.8-MAF reservoir proposed for Alternative B would necessitate the relocation or resizing of several Project features, including the access roads, South Bridge, Golden Gate Dam, and Sites Dam, to accommodate increased water elevation during Project operations. The larger reservoir would also require larger dams and two additional saddle dams. However, these differences in the size of the facility footprint, alignment, or construction disturbance area would not change the potential impacts associated with scenic vistas (**Impact Vis-1**), scenic resources within a State Scenic Highway (**Impact Vis-2**), visual character or quality of a site and its surroundings (**Impact Vis-3**), and a new source of light or glare (**Impact Vis-4**), compared to those under Alternative A.

Delevan Pipeline Complex

If Alternative B is implemented, the Delevan Pipeline Intake/Discharge Facilities would not pump water from the Sacramento River and would be replaced by the Delevan Pipeline Discharge Facility, which would be smaller, resulting in a reduced disturbance area. However, these differences in the size of the facility footprint, alignment, or construction disturbance area would not change the potential impacts associated with scenic vistas (**Impact Vis-1**), scenic resources within a State Scenic Highway (**Impact Vis-2**), visual character or quality of a site and its surroundings (**Impact Vis-3**), and a new source of light or glare (**Impact Vis-4**), compared to those under Alternative A.

Overhead Power Lines and Substations

If Alternative B is implemented, the Sites/Delevan Overhead Power Line would differ slightly from that described for Alternative A. However, these differences in the size of the facility footprint, alignment, or construction disturbance area would not change potential impacts associated with scenic vistas (**Impact Vis-1**), scenic resources within a State Scenic Highway (**Impact Vis-2**), visual character or quality of a site and its surroundings (**Impact Vis-3**), and a new source of light or glare (**Impact Vis-4**), compared to those under Alternative A.

Project Buffer

The boundary of the Project Buffer would be the same for all alternatives, but because the footprints of some of the Project facilities that are included in the Project Buffer would differ among the alternatives, the acreage of land within the Project Buffer would differ for Alternative B. However, these differences in the size of the area included within the buffer would not change the type of construction, operation, and maintenance activities. They would, therefore, have the same impacts associated with scenic vistas (**Impact Vis-1**), scenic resources within a State Scenic Highway (**Impact Vis-2**), visual character or quality of a site and its surroundings (**Impact Vis-3**), and a new source of light or glare (**Impact Vis-4**), compared to those under Alternative A.

30.3.6 Impacts Associated with Alternative C

30.3.6.1 Extended and Secondary Study Areas – Alternative C

Construction, Operation, and Maintenance Impacts

The impacts associated with Alternative C, as they relate to scenic vistas (**Impact Vis-1**), scenic resources within a State Scenic Highway (**Impact Vis-2**), visual character or quality of a site and its surroundings (**Impact Vis-3**), and a new source of light or glare (**Impact Vis-4**) would be the same as those described for Alternative A for the Extended and Secondary study areas.

30.3.6.2 Primary Study Area – Alternative C

Construction, Operation, and Maintenance Impacts

Many of the same Project facilities are included in both Alternatives A, B, and C (see Chapter 3 Description of the Sites Reservoir Project Alternatives, Table 3-1) and would result in similar alterations of the visual landscape once constructed. These facilities would require the same construction methods and operations and maintenance activities regardless of alternative, and would therefore result in the same construction, operation, and maintenance impacts on visual resources. Therefore, unless explicitly discussed below, impacts at all Project facilities are anticipated to be the same as those for Alternative A.

Sites Reservoir Complex

The Alternative C design of the Sites Reservoir Inundation Area, Sites Reservoir Dams, and Road Relocations and South Bridge is the same as described for Alternative B. These facilities would require the same construction methods and operation and maintenance activities regardless of alternative, and would, therefore, have the same impacts associated with scenic vistas (**Impact Vis-1**), scenic resources within a State Scenic Highway (**Impact Vis-2**), visual character or quality of a site and its surroundings (**Impact Vis-3**), and a new source of light or glare (**Impact Vis-4**), compared to those under Alternative B.

Project Buffer

The boundary of the Project Buffer would be the same for all alternatives, but because the footprints of some of the Project facilities that are included in the Project Buffer would differ among the alternatives, the acreage of land within the Project Buffer would differ for Alternative C. However, these differences in the size of the area included within the buffer would not change the type of construction, operation, and maintenance activities. They would, therefore, have the same impacts associated with scenic vistas (**Impact Vis-1**), scenic resources within a State Scenic Highway (**Impact Vis-2**), visual character or

quality of a site and its surroundings (**Impact Vis-3**), and a new source of light or glare (**Impact Vis-4**), compared to those under Alternative A.

30.3.7 Impacts Associated with Alternative D

30.3.7.1 Extended and Secondary Study Areas – Alternative D

Construction, Operation, and Maintenance Impacts

The impacts associated with Alternative D as they relate to scenic vistas (**Impact Vis-1**), scenic resources within a State Scenic Highway (**Impact Vis-2**), visual character or quality of a site and its surroundings (**Impact Vis-3**), and a new source of light or glare (**Impact Vis-4**) would be the same as those described for Alternative C for the Extended and Secondary study areas.

30.3.7.2 Primary Study Area – Alternative D

Many of the same Project facilities are included in Alternatives A, B, C, and D (see Chapter 3 Description of the Sites Reservoir Project Alternatives, Table 3-1) and would result in similar alterations of the visual landscape once constructed. These facilities would require the same construction methods and operations and maintenance activities regardless of alternative, and would therefore result in the same construction, operation, and maintenance impacts associated with scenic vistas (**Impact Vis-1**), scenic resources within a State Scenic Highway (**Impact Vis-2**), visual character or quality of a site and its surroundings (**Impact Vis-3**), and a new source of light or glare (**Impact Vis-4**). Therefore, unless explicitly discussed below, impacts on all Project facilities are anticipated to be the same as those for Alternatives A, B and C. The following are Project facilities and impacts associated with Alternative D:

- Alternative D would include the development of only two recreation areas (Stone Corral Recreation Area and Peninsula Hills Recreation Area) instead of up to five recreation areas that could be developed for each of the other alternatives. Alternative D would include a boat ramp on the western side of the reservoir where the existing Sites Lodoga Road would be inundated. That there would be only two recreation areas is not expected to substantially change the potential impacts to visual resources as compared to Alternative C.
- Under Alternative D, the TRR would be slightly smaller (approximately 80 acres smaller for Alternative D); however, the smaller TRR is not expected to change the potential impacts related to visual resources as compared to those under Alternative C.
- For Alternative D, the Delevan Pipeline alignment would be approximately 50 to 150 feet south of the alignment presented for Alternatives A, B, and C. The Alternative D alignment takes advantage of existing easements to reduce impacts on local landowners. The shift in alignment is not expected to change the potential impacts to visual resources.
- The boundary of the Project Buffer would be the same for all alternatives, but because the footprints of some of the Project facilities that are included in the Project Buffer would differ among the alternatives, the acreage of land within the Project Buffer would also differ. However, these differences in the size of the area included within the buffer would not change the type of construction, operation, and maintenance activities; therefore, Alternative D would have impacts similar to those described for all other alternatives.

- Under Alternative D, the Lurline Headwaters Recreation Area would not be constructed; therefore, the road segment providing access to that recreation area would not be required. Alternative D includes an additional 5.2 miles of roadway from Huffmaster Road to Leesville Road; otherwise, the design of the Sites Reservoir Inundation Area and Dams, and South Bridge would be the same as that for Alternative C and is not expected to change the potential impacts related to visual resources.

Unlike the other alternatives, Alternative D includes a north-south alignment of the Delevan Overhead Power Line, rather than the east-west alignment between the TRR and the Delevan Pipeline Intake/Discharge Facilities. Alternative D includes a proposed electrical substation west of Colusa in addition to the substation near the Holthouse Reservoir. The Alternative D Delevan Pumping/Generating Plant would receive power through a north-south aligned Sites/Delevan Overhead Power Line along SR 45. The modified route would extend south from Delevan Road, along SR 45, and would connect to a new substation immediately west of the City of Colusa. The total length of the power line would be 1 mile longer than described for Alternatives A, B, and C; however, it would be aligned within an existing transportation and utility corridor. The north-south alignment would pass a limited number of rural residences and businesses, including the Colusa Casino, the Colusa Indian Wellness Center, and the Colusa Indian Health Clinic before traversing through the west side of the City of Colusa to reach the proposed new substation on SR 20.

The new transmission line would be similar to existing overhead power lines along this route. Also, given the limited number of residences and businesses within direct view of the proposed north-south aligned Sites/Delevan Overhead Power Line, the agricultural nature of much of the area, and the speed at which travelers would pass the facility, the construction and long-term presence of the transmission line would be anticipated to result in the same impacts associated with scenic vistas (**Impact Vis-1**), scenic resources within a State Scenic Highway (**Impact Vis-2**), the visual character or quality of a site and its surroundings (**Impact Vis-3**), and a new source of light or glare (**Impact Vis-4**), as described for Alternative A when compared to the Existing Conditions/No Project/No Action Condition.

30.4 Mitigation Measures

30.4.1 Significance of Impacts with Implementation of Mitigation Measures

Because no potentially significant impacts were identified, no mitigation is required or recommended. Environmental commitments are included in all Project alternatives and discussed in Chapter 3 Description of the Sites Reservoir Project Alternatives.

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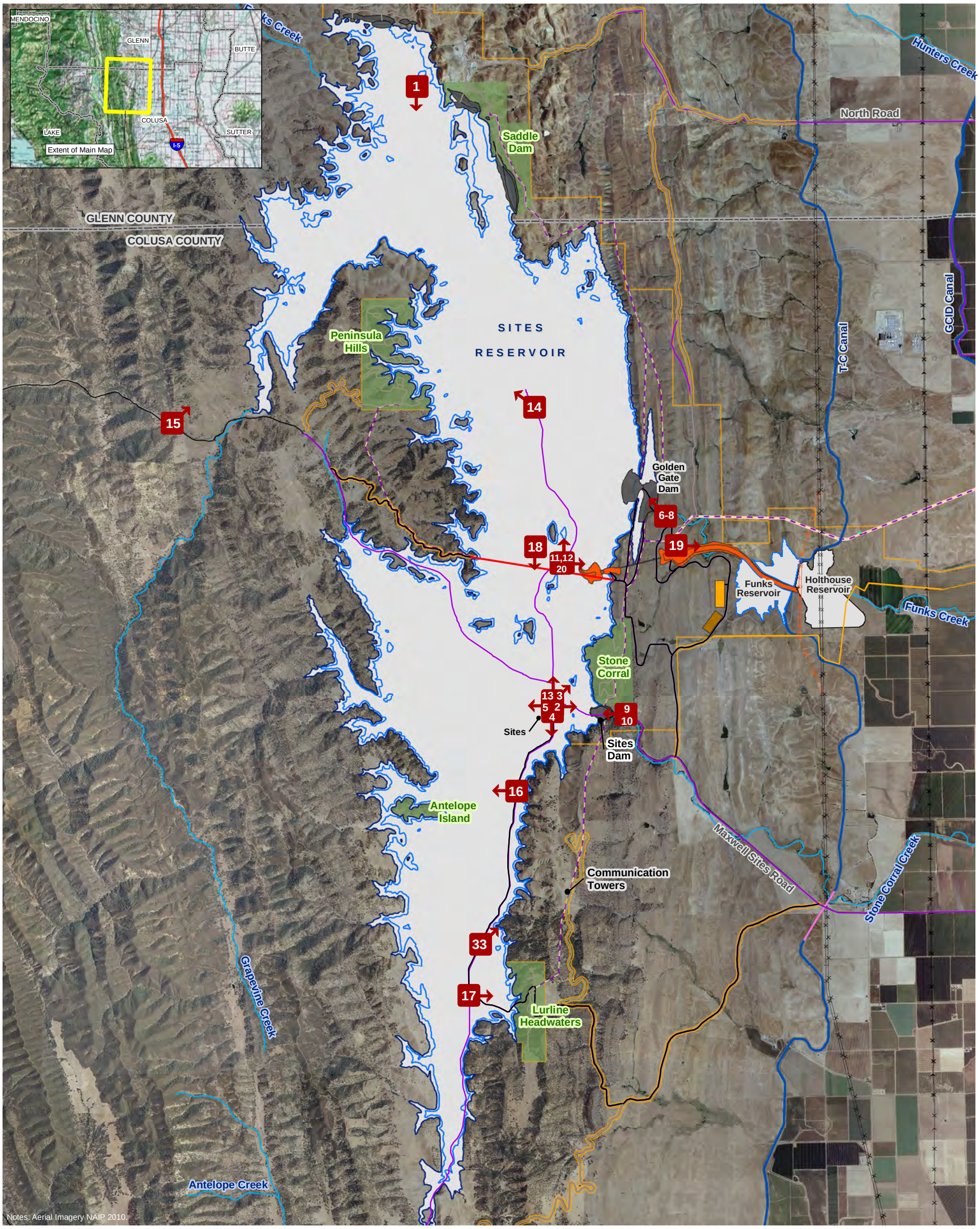

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0 0.375 0.75 1.5 2.25 3 Miles

N

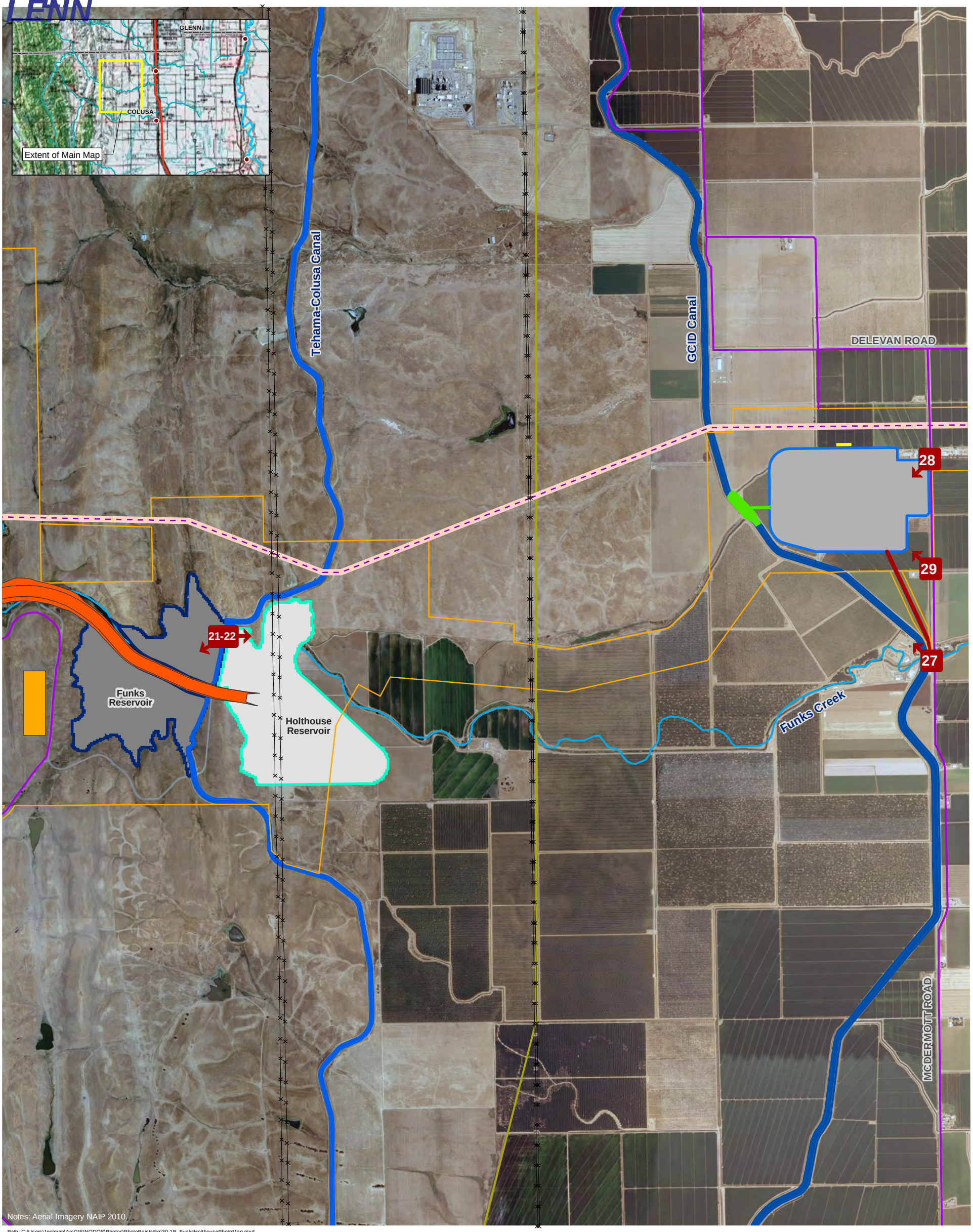
Legend

- Photo # & Location w/ Aspect
- 1.27-MAF Reservoir
- 1.81-MAF Reservoir
- Dams
- Existing Funks Reservoir
- Holthouse Reservoir Complex
- Recreation Areas
- Inlet/Outlet Structure
- Asphalt Plant
- Field Office Maintenance Yard
- Construction Disturbance Area
- Transmission Line Easement
- Sites/Delevan Overhead Power Line
- Existing Transmission Line
- Delevan Pipeline
- TRR Pipeline
- Existing Access Roads

Proposed Project Roads

- Gravel
- Paved
- South Bridge

FIGURE 30-1A
Sites Reservoir Photo Locations
Sites Reservoir Project EIR/EIS



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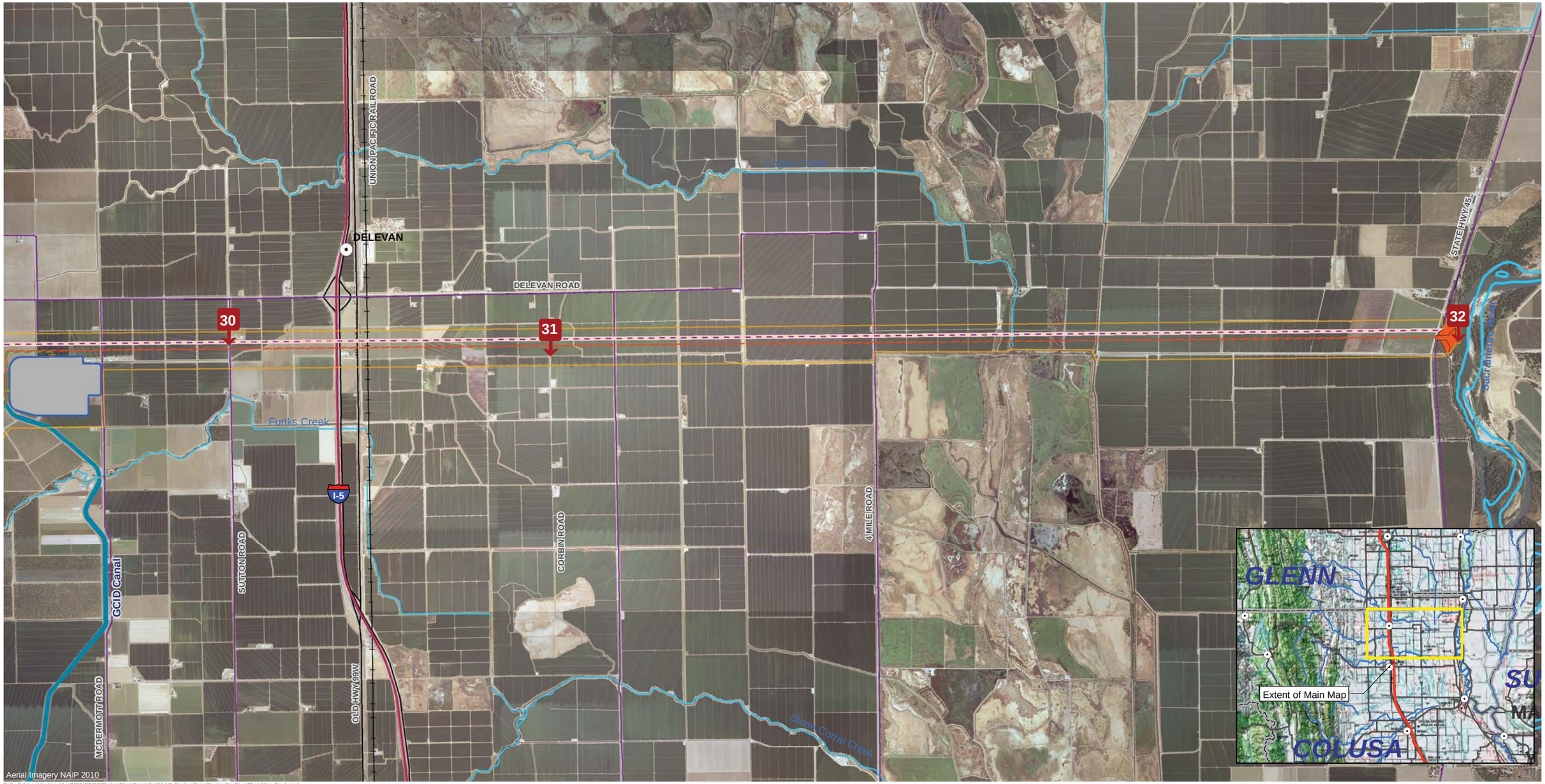
Legend

- Photo # & Location w/ Aspect
- Inlet/Outlet Structure
- Field Office Maintenance Yard
- Existing Funks Reservoir
- Holthouse Reservoir Complex
- TRR
- TRR to GCID Connection
- TRR Pump Station
- Construction Disturbance Area
- Transmission Line Easement
- Delevan Transmission Line
- Delevan Pipeline
- TRR Pipeline
- TRR to Funks Creek Pipeline
- Tehama-Colusa Canal
- Existing Gas Line
- Existing Transmission Line
- Existing Access Roads

0 0.2 0.4 0.8 1.2 1.6 Miles

N

FIGURE 30-1B
Holthouse Reservoir Complex and TRR Complex Photo Locations
Sites Reservoir Project EIR/EIS



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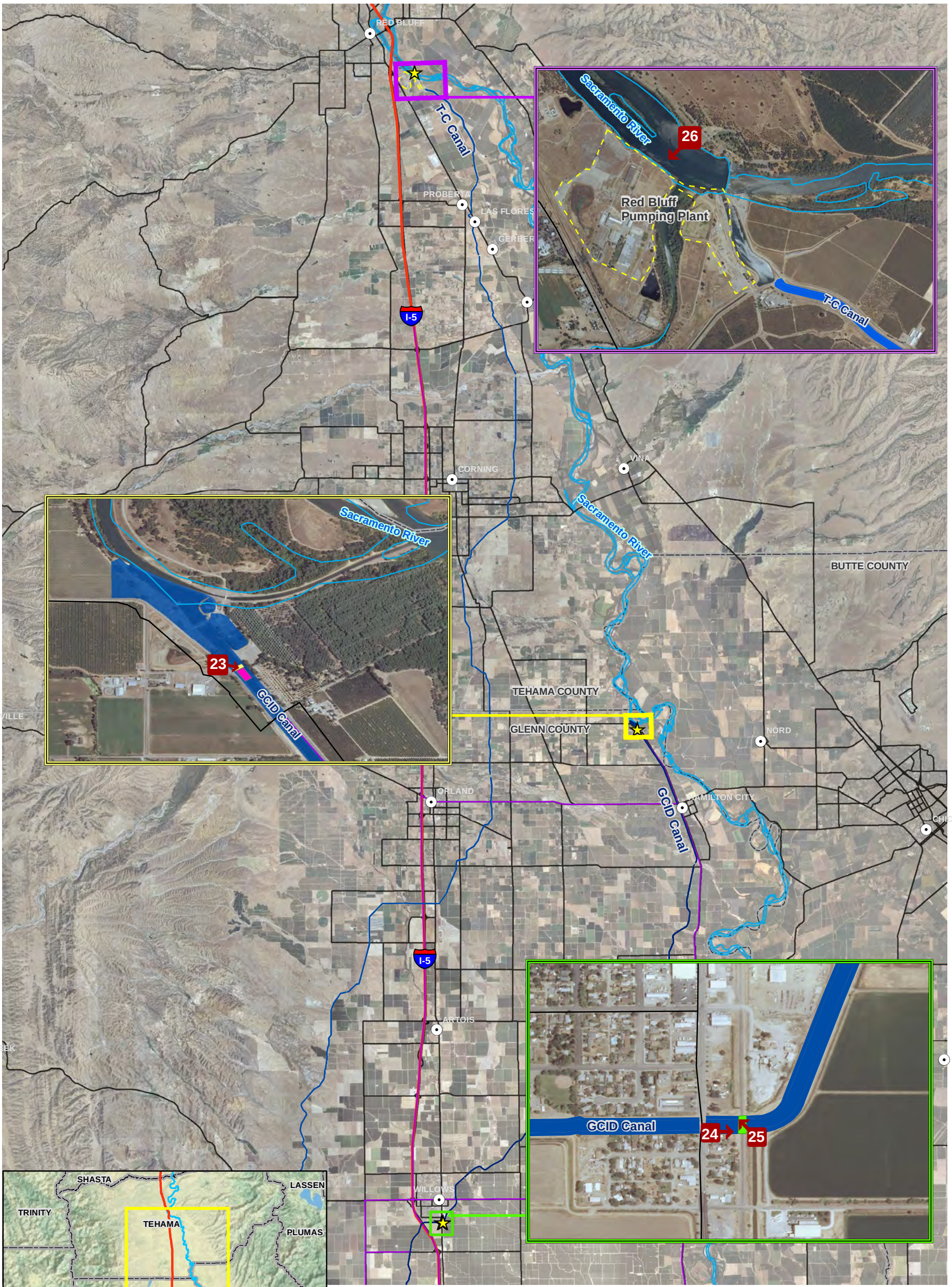
Legend

- 1 Photo # & Location w/ Aspect
- TRR
- TRR to GCID Connection
- Delevan Pipeline Intake/Discharge Facility
- Construction Disturbance Area
- Overhead Power Line Easement
- Delevan Overhead Power Line
- Delevan Pipeline
- TRR Pipeline
- Existing Access Roads

N

0 0.25 0.5 1 1.5 2 Miles

FIGURE 30-1C
Delevan Overhead Power Line
Delevan Pipeline and Delevan Pipeline Intake/Discharge Facilities
Photo Locations
Sites Reservoir Project EIR/EIS



Legend

- 1 → Photo # & Location w/ Aspect
- ☆ Project Facility Locations
- Red Bluff Pumping Plant
- GCID Canal Lining
- GCID Headgate Structure
- GCID Railroad Siphon
- Existing Access Roads

FIGURE 30-1D
RBPP and GCID Facilities Photo Locations
Sites Reservoir Project EIR/EIS

Photo 1: Looking south toward inundation area from atop a hill along the northern boundary of proposed Sites Reservoir. Saddle Dam Recreation Area would be located in the eastern foothills on the left of the photo.

FIGURE 30-2A
Northern Portion of Sites Reservoir Inundation Area and Saddle Dam Recreation Area Landscape Character Photo
Sites Reservoir Project EIR/EIS

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Photo 2: Looking east from Maxwell Sites Road at the T-intersection with Sites Lodoga Road and Huffmaster Road in the Town of Sites. This location is within the proposed Sites Reservoir Inundation Area.

Photo 3: Looking northeast from Maxwell Sites Road at the T-intersection with Sites Lodoga Road and Huffmaster Road in the Town of Sites. This location is within the proposed Sites Reservoir Inundation Area.

FIGURE 30-2B
Sites Reservoir Inundation Area
Landscape Character Photos
Sites Reservoir Project EIR/EIS

Photo 4: Looking south from Maxwell Sites Road at the T-intersection with Sites Lodoga Road and Huffmaster Road in the Town of Sites. This location is within the proposed Sites Reservoir Inundation Area.

Photo 5: Looking west from near the Maxwell Sites Road at the T-intersection with Sites Lodoga Road and Huffmaster Road in the Town of Sites. This location is within the proposed Sites Reservoir Inundation Area.

FIGURE 30-2C
Sites Reservoir Inundation Area
Landscape Character Photos
Sites Reservoir Project EIR/EIS

Photo 6: Looking northwest toward the Golden Gate Dam location from outside of the inundation area.

Photo 7: Looking northwest toward the Golden Gate Dam left abutment location.

FIGURE 30-2D
Golden Gate Dam
Landscape Character Photos
Sites Reservoir Project EIR/EIS

Photo 8: Looking northwest toward the Golden Gate Dam right abutment location from outside of the inundation area.

Photo 9: Looking west along Maxwell Sites Road toward the Sites Dam left abutment location, from outside of the inundation area.

FIGURE 30-2E
Golden Gate Dam and Sites Dam Landscape Character Photos
Sites Reservoir Project EIR/EIS

Photo 10: Looking west along Maxwell Sites Road toward the Sites Dam right abutment location, from outside of the inundation area.

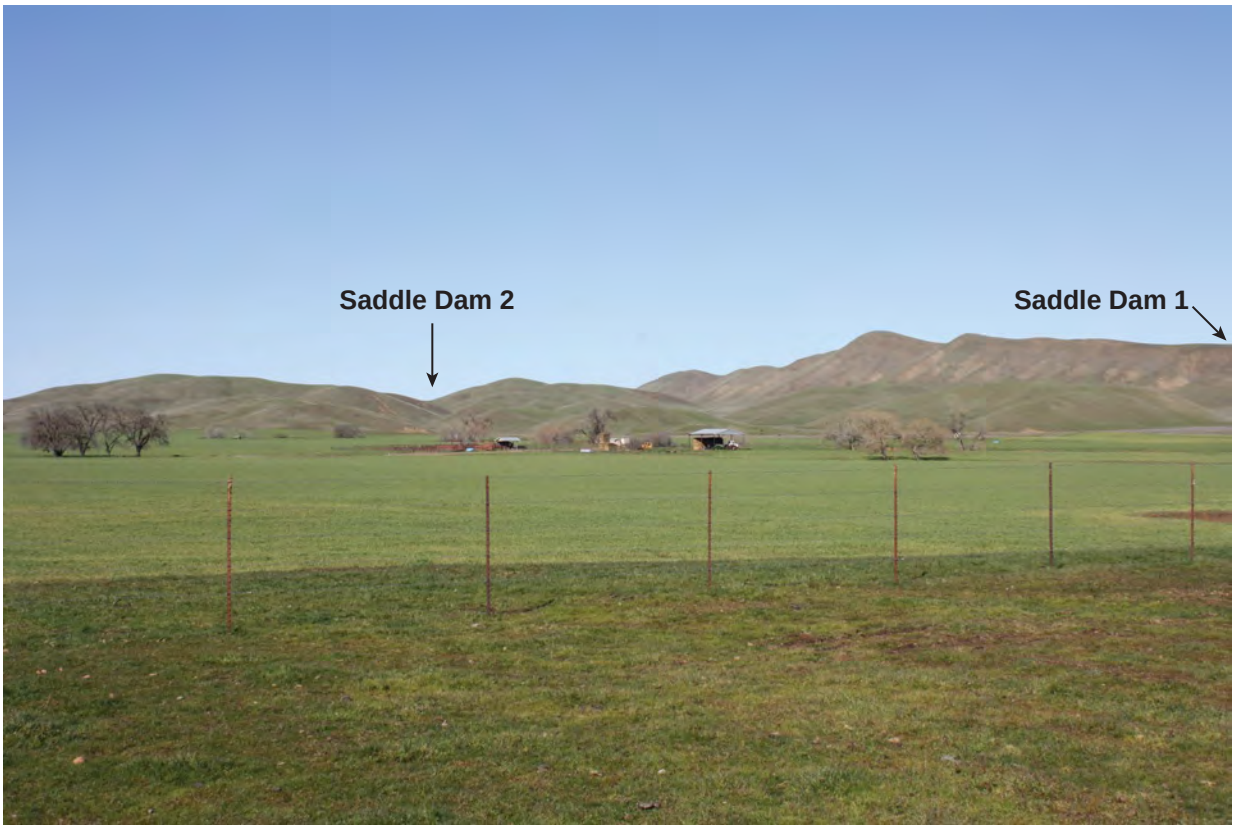

Photo 11: Looking north from Peterson Road toward Saddle Dams 1 and 2 locations from inside of the inundation area. Saddle Dam 1 would be located immediately adjacent to Logan Ridge on the right side of the photo. Saddle Dam 2 would be located to the left of center of the photo.

FIGURE 30-2F
Sites Dam and Saddle Dams 1 and 2 Landscape Character Photos
Sites Reservoir Project EIR/EIS

Photo 12: Looking north from Peterson Road toward the Saddle Dam 3 location from inside of the inundation area (in the distant hills near the center of the photo).

FIGURE 30-2G
Saddle Dam 3
Landscape Character Photo
Sites Reservoir Project EIR/EIS

Photo 13: Looking northeast from intersection of Maxwell Sites Road and Sites Lodoga Road toward the Stone Corral Recreation Area location, from within the inundation area.

FIGURE 30-2H
Stone Corral Recreation Area
Landscape Character Photo
Sites Reservoir Project EIR/EIS

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Photo 14: Looking northwest from within the Sites Reservoir Inundation Area toward the Peninsula Hills Recreation Area location.

FIGURE 30-2I
Peninsula Hills Recreation Area
Landscape Character Photo
Sites Reservoir Project EIR/EIS

Photo 15: Looking northeast from Sites Lodoga Road toward the Peninsula Hills Recreation Area location.

Photo 16: Looking west from Huffmaster Road toward the Antelope Island Recreation Area location.

FIGURE 30-2J
Peninsula Hills and Antelope Island Recreation Areas
Landscape Character Photos
Sites Reservoir Project EIR/EIS

Photo 17: Looking east from Huffmaster Road toward the Lurline Headwaters Recreation Area location.

Photo 18: Looking south from Peterson Road toward the South Bridge alignment from within the inundation area.

FIGURE 30-2K
Lurline Headwaters Recreation Area and South Bridge Landscape Character Photos
Sites Reservoir Project EIR/EIS

Photo 19: Looking east toward the Sites Pumping/Generating Plant location, from outside the inundation area.

Photo 20: Looking east from Peterson Road (within the Sites Reservoir Inundation Area) toward Sites Reservoir Inlet/Outlet structure location.

FIGURE 30-2L
Sites Reservoir Pumping/Generating Plant and Inlet/Outlet Structure Landscape Character Photos
Sites Reservoir Project EIR/EIS

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Photo 21: Looking west at the existing Funks Reservoir toward the Field Office Maintenance Yard location (to the right of center of photo) from the downstream side of Funks Reservoir near Funks Creek and the Funks Dam Spillway.

FIGURE 30-2M
Field Office Maintenance Yard and Existing Funks Reservoir Landscape Character Photo
Sites Reservoir Project EIR/EIS

Photo 22: Looking east at the Holthouse Reservoir location from the downstream side of Funks Reservoir near Funks Creek and the Funks Dam Spillway.

FIGURE 30-2N
Holthouse Reservoir Complex
Landscape Character Photo
Sites Reservoir Project EIR/EIS

Photo 23: Looking east and southeast toward the proposed GCID Canal Headgate Structure and Canal Lining location from the west side of the GCID Canal.

FIGURE 30-2O
Proposed GCID Canal Headgate Structure and Canal Lining Location Landscape Character Photo
Sites Reservoir Project EIR/EIS

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Photo 24: Looking east toward the proposed GCID Canal Railroad Siphon Replacement location from the east side of Tehama Street/Highway 99W atop the GCID Canal berm.

Photo 25: Looking west at the proposed GCID Canal Railroad Siphon Replacement location from the east side of the railroad tracks atop the GCID Canal berm.

FIGURE 30-2P
GCID Canal Railroad Siphon Replacement
Landscape Character Photos
Sites Reservoir Project EIR/EIS

Photo 26: Looking west from the east side of the Sacramento River at the Red Bluff Pumping Plant.

Photo 27: Looking northwest along the alignment of the TRR to Funks Creek Pipeline near the Outlet location at the Funks Creek crossing of McDermott Road.

FIGURE 30-2Q
Red Bluff Pumping Plant and TRR Facilities Landscape Character Photos
Sites Reservoir Project EIR/EIS

Photo 28: Looking southwest from McDermott Road and the residences near the northeast corner of the TRR toward the TRR location.

Photo 29: Looking northwest from McDermott Road and Lenahan Road toward the TRR location.

FIGURE 30-2R
Terminal Regulating Reservoir
Landscape Character Photos
Sites Reservoir Project EIR/EIS

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Photo 30: Looking south from Sutton Road approximately 0.25 mile south of Delevan Road toward the Sites/Delevan Overhead Power Line Line and Delevan Pipeline location.

FIGURE 30-2S
Sites/Delevan Overhead Power Line and Delevan Pipeline Landscape Character Photo
Sites Reservoir Project EIR/EIS

Photo 31: Looking south from Corbin Road approximately 0.25 mile south of Delevan Road toward the Delevan Overhead Power Line and Delevan Pipeline location.

FIGURE 30-2T
Delevan Overhead Power Line and Delevan Pipeline Landscape Character Photo
Sites Reservoir Project EIR/EIS

Photo 32: Looking south (downstream) from the Maxwell Irrigation District facility on the west side of the Sacramento River toward the Delevan Pipeline Intake and Discharge Facilities location.

Photo 33: Looking northeast from Huffmaster Road toward the Communication Towers from within the inundation area.

FIGURE 30-2U
Delevan Pipeline Intake/Discharge Facilities and Communication Towers Landscape Character Photos
Sites Reservoir Project EIR/EIS

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Photo 34: Looking south along the Overhead Power Line (Alternate Alignment), on State Route 45 near Willow Creek Road.

FIGURE 30-2V
Overhead Power Line
(Alternate Alignment)
Landscape Character Photo
Sites Reservoir Project EIR/EIS

Photo 35: Looking south towards the proposed Boat Ramp Recreation Area, along Sites Lodoga Road.

FIGURE 30-2W
Boat Ramp
Landscape Character Photo
Sites Reservoir Project EIR/EIS