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.

The regulatory setting for visual resources is discussed briefly in this chapter, and is presented in greater detail in Chapter 4 Environmental Compliance and Permit Summary.

This chapter focuses primarily on the Primary Study Area. Potential impacts in the Secondary and Extended 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 significant or potentially significant impacts, where appropriate.

30.2 Environmental Setting/Affected Environment

30.2.1 Introduction

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 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 (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, and the Sacramento River and shoreline near the proposed Delevan Pipeline Intake Facilities. There are several State Recreation Areas and designated wildlife refuges within the Secondary and Extended 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 the I-5, Old Highway 99W, 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:

- 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 (Reclamation and CDPR, 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. State Route (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 waterbody and its surroundings (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

[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

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 in Figure 1-7 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 22 counties (14 of the 22 counties are also located in the Extended Study Area). The individual waterbodies 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 waterbodies (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), which is included in the Secondary Study Area, is located on the Sacramento River approximately two 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 Visual Environment

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 National Wildlife Refuge, 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, Oxbow Waterfowl Area, Oxbow Heron Rookery, Princeton Riparian Woodland, Sacramento River Wildlife Area, 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 National Wildlife Refuge, 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 National Wildlife Refuge, Delevan National Wildlife Refuge, Sacramento National Wildlife Refuge, Willow Creek-Lurline Wildlife Management Area, North Central Valley Wildlife Management Area, Colusa Bypass Wildlife Area, Sacramento River Wildlife Area, 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.

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 significant impacts to 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 three alternatives was determined by mapping a one-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).

Project Facility Footprints Landscape Description

Figures 30-1A to 30-1D show the locations of the proposed 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 30-2U 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 proposed Project facility footprints are provided below.

Sites Reservoir Inundation Area

The affected environment of the Sites Reservoir Inundation Area is the same for the two proposed reservoir sizes (and all three 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 in Figures 30-2A through 30-2C.

Sites Reservoir Dams

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 and C; Golden Gate Dam and Sites Dam are proposed for Alternatives A, B, and C. The dam locations for Alternatives A, B, and C 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 two 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 in 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 in 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.

Recreation Facilities

Up to five recreation areas are proposed for Alternatives A, B, and C. 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 described below (Table 30-1), and photos of the Saddle Dam, Peninsula Hills, Stone Corral, Antelope Island, and Lurline Headwaters recreation areas are included as Figures 30-2A, 30-2H, 30-2I, 30-2J, and 30-2K.

Table 30-1
Visual Character of the Proposed Recreation Areas

Figure No.	Recreation Area	Location*	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
30-2K	Lurline Headwaters	Southeast	219	Low-lying open grasslands interspersed with areas of hilly oak woodlands to the west
30-2A	Saddle Dam	Northeast	329	Gently rolling open grasslands with interspersed seasonal wetland areas

*Relative to proposed Site Reservoir Inundation Area.

Road Relocations and South Bridge

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 two 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 in 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 two miles through similar terrain if Alternative A is implemented, and three miles if Alternatives B or C are 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.

Sites Reservoir Inlet/Outlet Structure, Sites Pumping/Generating Plant, Sites Electrical Switchyard, Tunnel from Sites Pumping/Generating Plant to Sites Reservoir Inlet/Outlet Structure, and Field Office Maintenance Yard

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 in Figure 30-2L. The existing visual character of the Field Office Maintenance Yard location is shown in Figure 30-2M.

Holthouse Reservoir Complex and Holthouse Reservoir Electrical Switchyard

The Holthouse Reservoir Complex and Holthouse Reservoir Electrical Switchyard would be located east of and adjacent to the existing Funks Reservoir, T-C 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 Electrical Switchyard or the 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 and Holthouse Reservoir Electrical Switchyard 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 and Holthouse Reservoir Electrical Switchyard location from the existing Funks Reservoir near Funks Creek and the Funks Dam spillway. The existing Funks Reservoir is shown in Figure 30-2M.

Glenn-Colusa Irrigation District Canal Facilities Modifications

The Glenn-Colusa Irrigation District (GCID) 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 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 Canal Headgate Structure and Canal Lining location is shown in Figure 30-2O.

The railroad siphon replacement would be constructed at the intersection of the GCID 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 Canal Railroad Siphon Replacement is shown in 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.

Terminal Regulating Reservoir, Glenn-Colusa Irrigation District Canal Connection to the Terminal Regulating Reservoir, Terminal Regulating Reservoir Pumping/Generating Plant, Terminal Regulating Reservoir Electrical Switchyard, Terminal Regulating Reservoir Pipeline, Terminal Regulating Reservoir Pipeline Road, and Delevan Pipeline Electrical Switchyard

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 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 Delevan Pipeline Electrical Switchyard would be located where the existing PG&E transmission line crosses the proposed TRR Pipeline. The GCID 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.

Delevan Pipeline and Delevan Transmission Line

For all three alternatives, the proposed Delevan Transmission Line would be aligned east from the Sites Pumping/Generating Plant to the existing PG&E or WAPA transmission line. This segment of the Delevan Transmission Line would cross rolling rangeland transitioning into flat agricultural land. For Alternatives A and C, the Delevan Transmission Line would continue from the PG&E or WAPA transmission line for approximately 10 miles east to the proposed Delevan Pipeline Intake Facilities along the Sacramento River. For all three alternatives, the Delevan Pipeline would be aligned from the proposed Holthouse Spillway and Stilling Basin and parallel the TRR Pipeline east to the TRR Pumping/Generating Plant. The Delevan Pipeline would then parallel the Delevan Transmission Line route to the Sacramento River. The eastern segments of the transmission line and pipeline would traverse flat agricultural land interspersed with county roads, rural residences, farms, and industrial land uses; 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 National Wildlife Refuge. 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, and area residents and recreational users of the Delevan National Wildlife Refuge 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, residences, and agricultural facilities. The alignment for the proposed Delevan Pipeline and Transmission Line facilities is shown in Figures 30-2S and 30-2T.

Delevan Pipeline Intake/Discharge Facilities

The Delevan Pipeline Intake Facilities and Delevan Pipeline Discharge Facility 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 in Figure 30-2U.

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 Regulatory Setting

Visual resources are regulated at the federal, State, and local levels. Provided below is a list of the applicable regulations. These regulations are discussed in detail in Chapter 4 Environmental Compliance and Permit Summary of this EIR/EIS.

30.3.1.1 Federal Plans, Policies, and Regulations

- National Scenic Byways Program

30.3.1.2 State Plans, Policies, and Regulations

- Delta Protection Act of 1992
- California Department of Transportation State Scenic Highway Program

30.3.1.3 Regional and Local Plans, Policies, and Regulations

- Tehama County General Plan
- Glenn County General Plan
- Colusa County General Plan

30.3.2 Evaluation Criteria and Significance Thresholds

Significance criteria represent the environmental thresholds that were used to identify whether an impact would be 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 NEPA. For the purposes of this analysis, an alternative would result in a 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.

30.3.3 Impact Assessment Assumptions and Methodology

30.3.3.1 Assumptions

The following assumptions were made regarding Project-related construction, operation, and maintenance impacts to 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 an additional pump into an existing bay at the Red Bluff Pumping Plant.
- The only direct Project-related maintenance activity that would occur in the Secondary Study Area is the sediment removal and disposal at the two intake locations (i.e., GCID Canal Intake and Red Bluff Pumping Plant).
- 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 to the operation of certain facilities that are located in the Extended Study Area, and indirect effects to 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.

30.3.3.2 Methodology

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 significant or potentially significant identified 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 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	Significant
High	Less than Significant	Potentially Significant	Potentially Significant	Significant	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. Impacts may be reduced to less than significant with implementation of mitigation.

Significant impacts may or may not be reduced to less-than-significant levels with implementation of feasible mitigation, and could exceed environmental thresholds.

Adapted from Reclamation, CCWD, and WAPA, 2009.

30.3.4 Topics Eliminated from Further Analytical Consideration

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

30.3.5 Impacts Associated with the No Project/No Action Alternative

30.3.5.1 Extended Study Area – No Project/No Action Alternative

Construction, Operation, and Maintenance Impacts

Agricultural Water Use, Municipal and Industrial Water Use, Wildlife Refuge Water Use, San Luis Reservoir, and Other Reservoirs

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

The No Project/No Action Alternative includes implementation of projects and programs being constructed, or those that have gained approval, as of June 2009. The impacts of these projects have already been evaluated on a project-by-project basis, pursuant to CEQA and/or NEPA, and their potential for impacts to visual resources has been addressed in those environmental documents. Therefore, **there would not be a substantial adverse effect** on visual resources, when compared to Existing Conditions.

Population growth is expected to occur in California throughout the period of Project analysis (i.e., 100 years), and is included in the assumptions for the No Project/No Action Alternative. A larger population could be expected to result in more municipal and industrial development throughout the three study areas, resulting in landscape changes to the study areas. The projects that are included in the No Project/No Action Alternative would already have been in place for most of the Project analysis

period; as a result, the future population that chooses to relocate near the projects included in the No Project/No Action Alternative would not experience new visual resource impacts. Therefore, **there would not be a substantial adverse effect,** when compared to Existing Conditions.

Historically, agricultural, municipal (including recreational water use at the reservoirs in the Extended Study Area), and industrial water use depends on several natural and human-induced variables. This trend is expected to occur into the future. The annual and seasonal variation in water use is typical and gradual, and is not expected to substantially impact visual resources. Therefore, **there would not be a substantial adverse effect,** when compared to Existing Conditions.

Due to the commitments set forth in the Central Valley Project Improvement Act (CVPIA), water deliveries to the Wildlife Refuges are expected to remain as-is in most cases if the No Project/No Action Alternative is implemented. Therefore, **there would not be a substantial adverse effect**, and there may be a **potentially beneficial effect,** on overall visual resources within the wildlife refuges, when compared to Existing Conditions, because a stable water supply would support existing wetland habitat.

No new sources of light would be introduced in the Wildlife Refuges as a result of potential changes in wildlife refuge water usage. Increased water supply to the refuges would increase the potential for daytime glare from water surface areas. However, this potential increase would be marginal and not readily noticeable to recreationists using the refuges. Therefore, **there would not be a substantial adverse effect** on day or nighttime views in the area, when compared to Existing Conditions.

Project operational modeling for Existing Conditions at the San Luis Reservoir indicates that drawdown would vary less in summer months than observed historically due to the implementation of agency programs and management plans that would cause a reduction in exports, allocation, or peak diversion rates. Water levels for the No Project/No Action Alternative would be higher than for Existing Conditions due to recent drawdown reductions and would be less variable than recorded historically. Therefore, **there would not be a substantial adverse effect**, and there may be a **potentially beneficial effect,** on scenic vistas from the No Project/No Action Alternative, when compared to Existing Conditions, because the reservoir would, on average, maintain higher water levels, which would help to preserve or improve its high scenic quality.

No new sources of light would be introduced at San Luis Reservoir. A more stable water level in the reservoir may increase the potential for daytime glare from the water surface while reducing potential glare from exposed rock and barren shoreline during summer months. However, these changes would not be readily noticeable to recreationists using the San Luis Reservoir Recreation Area. Therefore, **there would not be substantial adverse effect** on daytime views in the area, when compared to Existing Conditions.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to effects on scenic resources.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to effects on the existing visual character of a site and its surroundings.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to sources of light or glare.

30.3.5.2 Secondary Study Area – No Project/No Action Alternative

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

The No Project/No Action Alternative includes implementation of projects and programs being constructed, or those that have gained approval, as of June 2009. The impacts of these projects have already been evaluated on a project-by-project basis, pursuant to CEQA and/or NEPA, and their potential for visual resources impacts has been addressed in those environmental documents. Therefore, **there would not be a substantial adverse effect** on visual resources, when compared to Existing Conditions.

These Secondary Study Area waterbodies are operated pursuant to the same statutory regulations for both the No Project/No Action Alternative and Existing Conditions. In addition, the Secondary Study Area has historically experienced a wide range of reservoir storage levels and diversion rates, making it relatively complex to model future conditions.

Flows within the Sacramento River and through the Sacramento-San Joaquin Delta are highly regulated and are influenced by several factors: runoff from precipitation and snowmelt; natural variation; upstream water storage facilities; water diversions for agricultural, municipal, and industrial purposes; agricultural and municipal discharges; and a flood damage reduction system that includes levees, floodplains (the Yolo, Sutter, and Colusa bypasses), and weirs. Sacramento River and Delta flows vary substantially on a seasonal and annual basis. Seasonally, flows in the river may vary as a result of runoff from local tributaries and releases from the major water storage reservoirs, as well as diversions by agricultural, municipal, and other users. From year to year, river flows vary according to precipitation, the volume of carryover storage in reservoirs, and releases to downstream water users (SWRCB and CalEPA, 2010).

Although the above-listed reservoirs and rivers may experience marginal changes in reservoir storage levels and river flow rates as a result of implementation of projects and programs included in the No Project/No Action Alternative, they would not fall outside of the historical ranges of operation, and would, therefore, not visibly impact aesthetic resources. Therefore, **there would not be a substantial adverse effect**, when compared to Existing Conditions.

Folsom Lake and Lake Natoma are the smallest of the upstream reservoirs in the Secondary Study Area. Significant urban development and population growth is predicted in the American River Basin through 2050 (DOF, 2007). Full urban contract deliveries to meet this need would cause a reduction in Folsom Lake storage levels if the No Project/No Action Alternative is implemented. Increased reservoir drawdown would have the potential to adversely impact visual resources at Folsom Lake by exposing

wide portions of barren shoreline during the summer months and dry years. The No Project/No Action Alternative, therefore, **would have a potentially substantial adverse effect** on scenic vistas at Folsom Lake and Lake Natoma, when compared to Existing Conditions.

The Suisun, San Pablo, and San Francisco bays are large regional systems that do not respond dynamically to changes in flow due to the implementation of individual projects or management programs. No changes to visual resources are, therefore, expected if the No Project/No Action Alternative is implemented. Therefore, **there would not be a substantial adverse effect**, when compared to Existing Conditions.

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

SR 160 is a national and State-Designated Scenic Highway with extensive views along the Sacramento River and Sacramento-San Joaquin Delta (Caltrans, 2012). However, potential changes to flows in the Sacramento River and Delta if the No Project/No Action Alternative is implemented would not fall outside of historical operational ranges, and therefore, would not adversely impact visual resources. Except for the Sacramento River and Sacramento-San Joaquin Delta, there are no designated scenic highways in the vicinity of the reservoirs and rivers in the Secondary Study Area. Therefore, **there would not be a substantial adverse effect**, when compared to Existing Conditions.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to effects on the existing visual character of a site and its surroundings.

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

No new sources of light would be introduced at the Secondary Study Area facilities if the No Project/No Action Alternative is implemented. Unstable and decreased water levels in the reservoirs may decrease the potential for daytime glare from water surface areas while increasing potential glare from exposed rock and barren shoreline during summer months. However, these changes would be gradual and would not be easily noticeable to recreationists visiting the recreation areas. Therefore, **there would not be a substantial adverse effect** on daytime views within the Secondary Study Area from implementation of the No Project/No Action Alternative, when compared to Existing Conditions.

30.3.5.3 Primary Study Area – No Project/No Action Alternative

Construction, Operation, and Maintenance Impacts

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

The No Project/No Action Alternative assumes implementation of projects and programs being constructed, or those that have gained approval, as of June 2009. The impacts of these projects have already been evaluated on a project-by-project basis, pursuant to CEQA and/or NEPA, and their potential for impacts to visual resources has been addressed in those environmental documents. Projects included in the No Project/No Action Alternative are not located within the Primary Study Area; therefore, **there would not be a substantial adverse effect** on visual resources in that study area, when compared to

Existing Conditions. In addition, the Project would not be constructed if this alternative is implemented; therefore, **there would not be a substantial adverse effect**, when compared to Existing Conditions.

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

Refer to the **Impact Vis-1** discussion. In addition, projects considered within the No Project/No Action Alternative are not located within the viewshed of a State-designated scenic highway, and would, therefore, have **no impact** on scenic resources.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to effects on the existing visual character of a site and its surroundings.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to sources of light or glare.

30.3.6 Impacts Associated with Alternative A

30.3.6.1 Extended Study Area – Alternative A

Construction, Operation, and Maintenance Impacts

Agricultural, Municipal, and Industrial Water Use

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

There would be no direct Project-related construction or maintenance activities in the Extended Study Area; therefore, Alternative A would have **no impact** on visual resources in this area, when compared to Existing Conditions and the No Project/No Action Alternative. Proposed Project operational activities would result in improvement in surface water supply reliability for agricultural, municipal, and industrial users. It is improbable that improved water supply reliability would induce or change substantial agricultural land use changes or municipal and industrial water consumption patterns to the degree that would impact visual resources in the Extended Study Area. There would, therefore, be **no impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to effects on scenic resources.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to effects on the existing visual character of a site and its surroundings.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to sources of light or glare.

Wildlife Refuge Water Use

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

No direct Project-related construction or maintenance activities would occur in the Extended Study Area. The wildlife refuges that would receive Level 4 water supplies would receive the same amount of supply with implementation of Alternative A as with the No Project/No Action Alternative; however, the source of a portion of the supply would change.

Refer to the **Impact Vis-1** discussion for the No Project/No Action Alternative. There would be no adverse effect, resulting in **no impact** (and a **potentially beneficial effect**) from Alternative A, when compared to Existing Conditions.

When compared to the No Project/No Action Alternative, implementation of Alternative A would result in **no impact** because the wildlife refuge water use would remain the same.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to effects on scenic resources.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to effects on the existing visual character of a site and its surroundings.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to sources of light or glare.

San Luis Reservoir

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

No direct Project-related construction or maintenance activities would occur in the Extended Study Area. Direct Project-related operational effects at San Luis Reservoir would, however, result if Alternative A is implemented. San Luis Reservoir is a reregulating reservoir used to regulate distribution and meet delivery commitments to SWP and CVP contractors and is not intended for long-term storage. Drawdown of San Luis Reservoir is projected to increase with implementation of Alternative A, when compared to Existing Conditions and the No Project/No Action Alternative; however, projected levels would not be outside of the historical range. This would, therefore, be a **less-than-significant impact,** when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-1** discussion. State Designated Scenic Highway 152 follows the northern shore of San Luis Reservoir for approximately six miles. However, because projected reservoir water levels with implementation of Alternative A would remain within the historical range, there would be a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to effects on the existing visual character of a site and its surroundings.

Impact Vis-4: A New Source of Substantial Light or Glare which 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. Project effects on San Luis Reservoir operation would not require the installation of new sources of artificial light. Decreased water levels in the reservoir would decrease the potential for glare from water surface areas and increase the potential for glare from the bare exposed shorelines. However, the potential change in water levels would be within the historical range, and would not be easily noticeable to recreationists. This would be considered a **less-than-significant** impact on day or nighttime views in the area, when compared to Existing Conditions and the No Project/No Action Alternative.

Other Reservoirs

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

No direct Project-related construction or maintenance activities would occur in the Extended Study Area. All other reservoirs on the California Aqueduct are operated in a narrow range to reregulate 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** when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to effects on scenic resources.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to effects on the existing visual character of a site and its surroundings.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to sources of light or glare.

30.3.6.2 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

No direct Project-related construction or maintenance activities would occur in the Secondary Study Area waterbodies listed above. Implementation of Alternative A would result in increased storage within the reservoirs of the Secondary Study Area, particularly in Critical and Dry years. Operationally, Alternative A would also result in a general increase and stabilization 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 waterbodies. There would, therefore, be **no impact** (and **potentially beneficial effect)**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to effects on scenic resources.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to effects on the existing visual character of a site and its surroundings.

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

Refer to the **Impact Vis-1** discussion. That discussion is also applicable to sources of light or glare.

Pump Installation at the Red Bluff Pumping Plant

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

The only direct Project-related construction that would occur in the Secondary Study Area is related to the installation of an additional pump at the RBPP. The existing visual character of the Sacramento River at the RBPP appears industrially developed. The construction of an additional pump within an existing concrete bay, followed by its operation and maintenance, would not substantially degrade the visual character of the area, nor 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 be consistent 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**, when compared to Existing Conditions and the No Project/No Action Alternative.

The only direct Project-related maintenance activity that would occur in the Secondary Study Area is the sediment removal and disposal at the GCID Canal Intake and the Red Bluff Pumping Plant. The existing visual character would not be degraded by increasing the frequency and intensity of dredging at the RBPP nor are there any designated scenic vistas in the vicinity of the facility. The existing visual character at the GCID 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 Canal Intake would not substantially degrade the existing visual quality of the site, nor adversely affect a scenic vista. Additionally, there are no Glenn County General Plan policies which would be relevant to the maintenance of the GCID Canal Intake. There would, therefore, be a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-1** discussion. There are no State scenic highways within the vicinity of the RBPP or GCID Canal Intake; therefore, there would be no impact to scenic resources within a State scenic highway at these locations. In the greater Sacramento River region, there would be also be **no impact** (and **potentially beneficial effect**), when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-1** discussion. There would be **no impact** (and **potentially beneficial effect**), when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-1** discussion. In addition, pump installation at the RBPP would be consistent 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). There would be **no impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

30.3.6.3 Primary Study Area – Alternative A

Construction, Operation, and Maintenance Impacts

Sites Reservoir Inundation Area

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; therefore the proposed Sites Reservoir would be consistent with the Colusa County 2030 General Plan and the Glenn County General Plan (Colusa County, 2012; Glenn County, 1993). The existing Antelope Valley (Sites Reservoir Inundation Area) is of high visual quality due to its many panoramic landscapes of open, hilly grasslands and oak woodlands from existing roads and residences. Construction of Alternative A would require the demolition of all structures within the proposed inundation area, including houses, barns, sheds, shops, and others auxiliary structures. Additionally, vegetation removal activities would degrade existing scenic views of the valley floor. Although Project-related changes to the landscape could become less visible over time, there would be brief views of these modifications during construction by motorists on portions of Lurline Road and Huffmaster Road, which would provide detoured vehicle access between Maxwell and Lodoga during construction. During the construction of Sites Reservoir, the area is expected to be of moderate visual quality despite the removal of trees and other vegetation, the presence of construction equipment, and the potential for fugitive dust generation, because the remaining open grasslands would remain largely intact.

The initial filling of the reservoir would occur over several years, during which time the area would transition from open grasslands to deepening wetlands which may attract birds and other regional riparian species. During this time, the inundation area would be of moderate to high visual quality. The construction and initial filling of Sites Reservoir would be considered a temporary impact, and would, therefore, have a **less-than-significant impact** on scenic vistas within the site, when compared to Existing Conditions and the No Project/No Action Alternative.

Upon completion of the initial filling of the reservoir, the full Sites Reservoir would convey the aesthetic of a large natural lake during Normal to Wet years. The operational reservoir inundation area during this time would be unique and visually dominant due to largely uninterrupted views of the waterbody and surrounding vegetated hillsides. During Dry years and in some summer months, the reservoir water supply would be drawn down to meet Project purposes. During periods of substantial drawdown, the shores and reaches of the inundation area would be unvegetated. The area would be visible by motorists from the proposed South Bridge and relocated road system, and by recreationists at the proposed recreation areas located around the reservoir, resulting in moderate to high visual sensitivity. If Alternative A is implemented, visual change would be high because the Sites Reservoir Inundation Area would be of high visual contrast, when compared to Existing Conditions. During Normal to Wet years, the reservoir would, however, also be of high visual quality due to its distinctive nature and visibility to a greater number of motorists and recreationists, when compared to Existing Conditions. Scenic views of the upland areas would be maintained, and new scenic views across the expansive reservoir would be created. During Dry to Critical years and some late summer months, the existing visual character of the area would temporarily deteriorate to a low to moderate visual quality. If Dry to Critical conditions were to last for several years, there is the potential for substantial degradation of the existing visual quality. Therefore, when compared to Existing Conditions and the No Project/No Action Alternative, there would be a **potentially significant impact**.

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

No State-designated scenic highways are aligned near or through the Sites Reservoir Inundation Area. When compared to Existing Conditions and the No Project/No Action Alternative, there would, therefore, be **no impact** from construction, operation, and maintenance of Alternative A.

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

Refer to the **Impact Vis-1** discussion. 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). Glenn County General Plan Policy NRP-16 also requires that grazing land be retained in large contiguous areas of the foothills (Glenn County, 1993). The proposed Sites Reservoir would impact grazing land and many open space features, and therefore, would be inconsistent with General Plan policies of Colusa and Glenn counties. When compared to Existing Conditions and the No Project/No Action Alternative, there would be a **potentially significant impact**.

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

Construction of Sites Reservoir would create new temporary sources of reflective daytime and nighttime glare. Construction activities would include the removal of all human-made structures and trees from the proposed inundation area. Areas of exposed earth would create potential sources of daytime glare prior to the filling of the reservoir. Construction equipment and workers' vehicles could also be a temporary source of reflective daytime glare. Colusa County 2030 General Plan Policy OSR 1-14 requires that development "Reduce light and glare from artificial lighting within open space and agricultural areas to the extent that it does not adversely impact the County's rural character," (Colusa County, 2012). Additionally, Glenn County General Plan Policy NRP-86 requires projects to "avoid light and glare impacts when considering development," (Glenn County, 1993). Construction activities during early morning and evening hours could require the use of construction lighting at individual Project facility work sites in areas that previously had no source of artificial lighting. Therefore, conditions during construction may be inconsistent with the General Plans of Colusa and Glenn counties. However, no sensitive receptors (residents and recreationists) would have views of the construction sites, and motorists would have only brief views of some of the construction areas from Lurline Road and Huffmaster Road in the southern portion of the inundation area. In addition, construction activities would be temporary. Therefore, new sources of light or glare due to Project construction would result in a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

The permanent conversion of a vegetated landscape to a 1.27-MAF reservoir would introduce a substantial new potential source of daytime and nighttime glare in the area. In addition, new sources of light and glare would result from the introduction of recreational boat use in the reservoir. When compared to Existing Conditions and the No Project/No Action Alternative, due to the permanent new source of glare created by the reservoir, this impact is considered **potentially significant**.

Sites Reservoir Dams

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

There are no officially designated scenic vista points in Colusa County; therefore, the proposed Sites Reservoir Dams would be consistent with the Colusa County 2030 General Plan and the Glenn County General Plan. Construction of the nine dams proposed as part of Alternative A would require the removal of vegetation and several large rock formations, which would degrade existing scenic views of the hilly grassland and rocky outcrops. These changes would be visible during construction; however, public views of the dam locations during construction would be partially obstructed by the terrain and limited to motorists along Eastside Road, which would not be included in the detour route for Maxwell Sites Road and Sites Lodoga Road. The construction of the dams would occur over several years, during which time the visual character is expected to be of low visual quality due to the presence of construction equipment and materials, and the removal of vegetation within the dam footprints. The dam construction would be considered a temporary impact, and would, therefore, result in a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

The proposed dams would be constructed as earthfill embankment dams, and are designed to be constructed primarily of excavated on-site soil and rock. Although the dams would be large features, the use of largely on-site earthen materials for the proposed dams would generate low visual contrast for viewers while in operation and cause them to be visually subordinate to the proposed reservoir and its surroundings. Additionally, views of the proposed dams would be largely obstructed due to the area terrain and limited in duration to motorists on the relocated roads. The overall visual change would be low to moderate, and visual sensitivity would be low. Therefore, when compared to Existing Conditions and the No Project/No Action Alternative, construction and operation of the proposed dams would result in a **less-than-significant impact**.

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

Refer to the **Impact Vis-2** discussion for the Sites Reservoir Inundation Area. That discussion is also applicable to Sites Reservoir Dams.

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

Refer to the **Impact Vis-1** discussion. In addition, the proposed Sites Reservoir Dams would be consistent with Colusa County General Plan Policy OSR 1-5 as supported by the **Impact Vis-1** discussion. There are no Glenn County General Plan policies which would be relevant to the construction, operation, or maintenance of the Sites Reservoir Dams. Therefore, there would be **a less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

The construction of Golden Gate Dam, Sites Dam, and seven saddle dams would create new temporary and permanent sources of reflective daytime glare and nighttime lighting. Building materials used to construct the dams 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.

Construction activities during early morning and evening hours would require the use of lighting at Project work sites for several years. In addition, operation and maintenance of the dams may require new sources of permanent safety lighting. Views of the proposed dams and their associated operations and maintenance activities would, however, be largely obstructed due to the area terrain and limited in duration to motorists on the relocated roads. The proposed dams would not require the installation of highly visible artificial lighting, and therefore, would be consistent with Colusa County General Plan Policy OSR 1-14 and Glenn County General Plan Policy NRP-86. Overall visual change would be moderate; however, because visual sensitivity would be low, the impact of new sources of light and glare is considered a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

Recreation Areas

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; therefore, the proposed Recreation Areas would be consistent with the Colusa County 2030 General Plan and Glenn County General Plan. Construction of the proposed Recreation Areas would require grading and the removal of some vegetation for the construction of roads and facilities such as the restrooms, campsites, and picnic areas. However, construction would not be intensive because the natural character of the recreation areas would be generally maintained. These changes would be visible during construction; however, public views of the recreation area locations during construction would be partially obstructed by the terrain and limited to motorists along the proposed detour route. The construction of the recreation areas would occur over several years, during which time the visual character is expected to be of moderate visual quality due to the presence of construction equipment and materials within the proposed recreation areas footprints. Construction of the recreation areas would be considered a temporary impact, and would, therefore, have a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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 currently 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** to scenic resources 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 visual sensitivity of visiting recreationists would be moderate to high, the overall visual change would be low. Therefore, when compared to Existing Conditions and the No Project/No Action Alternative, this would result in a **less-than-significant impact**.

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

Refer to the **Impact Vis-2** discussion for the Sites Reservoir Inundation Area. That discussion is also applicable to the Recreation Areas.

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

Refer to the **Impact Vis-1** discussion. In addition, the proposed Recreation Areas would be consistent with Colusa County 2030 General Plan Policy CC 1-15 and Glenn County General Plan Policy NRP-16. Therefore, when compared to Existing Conditions and the No Project/No Action Alternative, this would result in a **less-than-significant impact**.

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

The construction up to five Recreation Areas would create new temporary sources of reflective daytime and nighttime glare. Recreational facility structures, roadways, and roadway fixtures, such as safety barriers, have the potential to be reflective under natural and artificial light. Construction equipment and workers' vehicles could also be a temporary source of reflective daytime glare. Construction activities during early morning and evening hours would require the use of lighting. Construction lighting would be temporary, and therefore, would result in a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative. New sources of permanent nighttime lighting would be required for safety purposes in the recreational areas. In addition, new sources of light and glare would be introduced by operations and maintenance vehicles, recreationists' vehicles, boats, and campfires in the recreation areas. Therefore, operation of the proposed Recreation Areas has the potential to be inconsistent with Colusa County 2030 General Plan Policy OSR 1-14 and Glenn County General Plan Policy NRP-86. When compared to Existing Conditions and the No Project/No Action Alternative, this impact is considered **potentially significant.**

Road Relocations and South Bridge

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; therefore, the proposed Road Relocations and South Bridge would be consistent with the Colusa County 2030 General Plan and Glenn County General Plan. Alternative A would require the construction of approximately 44 miles of new public access roads, and improvements to several existing paved and gravel roads. The construction of new roads and improvement of existing roads, and the maintenance of Project roads would temporarily degrade the scenic views from and visual character of the area due to the presence of construction equipment and workers, removal of vegetation, and generation of dust. During operation, views of the new roadways would generally be seen at a shallow viewing angle, and would appear similar to other county roads in the region, and therefore would be of low visual contrast. The road relocations would neither permanently block nor impair views of surrounding landscape, and would generally be visible only by motorists using these roads. Construction of the proposed relocated roads, road improvements, and the presence of the roads would not degrade any existing scenic vistas from or near the area. Visual sensitivity of motorists using the new roads would be low and the visual change would also be low, therefore, the proposed road relocations would result in a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative

Construction of the bridge 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. These changes would be visible during construction; however, public views of the bridge alignment during construction would

be obstructed by the terrain. Operation and maintenance activities 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. Both bridge construction and its operation and maintenance would, therefore, have a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative

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 (height and massing), the introduction of a new line to the landscape, and a change in the landscape's texture and color from Existing Conditions. 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 both the existing setting as well as alongside other Project facilities included in Alternative A. The South Bridge would be visible by recreationists from the proposed Stone Corral Recreation Area, who may have a high visual sensitivity to such infrastructure within a natural landscape. Introduction of the proposed South Bridge would create a significant visual change in a location with the potential for moderate to high visual sensitivity. This would, therefore, result in a **potentially significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-2** discussion for the Sites Reservoir Inundation Area. That discussion is also applicable to the Road Relocations and South Bridge.

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

Refer to the **Impact Vis-1** discussion. Colusa County 2030 General Plan Policy CIRC 1-8 requires that transportation facilities are planned and designed to "avoid damage to the County's scenic and environmental resources, such as reductions in air quality and disruption of soils, topography, vegetative cover, and wildlife habitat," (Colusa County, 2012). Although new roads would be constructed to be aesthetically similar to existing County roads, the proposed Road Relocations and South Bridge would require permanent vegetation removal and would, therefore, be inconsistent with the Colusa County General Plan. In addition, North Road and Eastside Road would be constructed within Glenn County and would potentially be inconsistent with Glenn County General Plan Policy NRP-16, which involves retaining grazing land in large contiguous areas of the foothills (Glenn County, 1993). This would result in a **potentially significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-4** discussion for the Site Reservoir Inundation Area construction impacts.

During operations, vehicles traveling on the South Bridge and relocated roads would create a new source of daytime glare and nighttime lighting in the area. In addition, guardrails and other roadway fixtures, such as retaining walls, safety barriers, light standards, and other structures, have the potential to be

reflective under natural and artificial light. Therefore, operation of the proposed Road Relocations and South Bridge has the potential to be inconsistent with Colusa County 2030 General Plan Policy OSR 1-14 and Glenn County General Plan NRP-86. When compared to Existing Conditions and the No Project/No Action Alternative, this impact is considered **potentially significant**.

Sites Pumping/Generating Plant, Sites Electrical Switchyard, Field Office Maintenance Yard, Tunnel from Sites Pumping/Generating Plant to Sites Reservoir Inlet/Outlet Structure, Sites Reservoir Inlet/Outlet Structure, Holthouse Reservoir Complex, and Holthouse Reservoir Electrical Switchyard

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

There are no officially designated scenic vista points in Colusa County; therefore, these proposed facilities would be consistent with the Colusa County 2030 General Plan. Construction of Alternative A would require the demolition of all structures within the footprint and buffer of the proposed facilities, including a shed and a barn. During construction, these facility locations would be concentrated in an area that would prohibit public access, and therefore, eliminate public views by motorists and residents. 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, the vehicles and equipment used may be similar to those used in the transport of agricultural goods along the same roads. Construction of these facilities would not substantially affect a scenic vista, and would, therefore, result in a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative

During Project operations and maintenance, several of these facilities would be underground or underwater features (including the Site Reservoir Inlet/Outlet Structure and all tunnels and pipelines), and therefore, not visible. There would be limited views of the Holthouse Reservoir by motorists on Eastside Road; however viewers may perceive this water feature as having high visual quality. Motorists along Eastside Road would experience brief views of the Field Office Maintenance Yard and Sites Electrical Switchyard; however; these types of structures are characteristic of this agricultural region. Although the construction of a new reservoir complex and several new buildings would be a moderate visual change, the extent of visibility of these Project facilities is minimal; therefore, visual sensitivity is considered low. Operation of these facilities would not affect a scenic vista, resulting in a **less-than-significant impact** when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-2** discussion for the Sites Reservoir Inundation Area. That discussion is also applicable to the Sites Pumping/Generating Plant, Sites Electrical Switchyard, Field Office Maintenance Yard, Tunnel from Sites Pumping/Generating Plant to Sites Reservoir Inlet/Outlet Structure, Sites Reservoir Inlet/Outlet Structure, Holthouse Reservoir Complex, and Holthouse Reservoir Electrical Switchyard.

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

Refer to the **Impact Vis-1** discussion. In addition, Colusa County 2030 General Plan Policy CC 1-16 requires “all new development to protect the scenic beauty of the County, incorporate high quality site

design, architecture, and planning so as to enhance the overall quality of the built environment in the County's communities and create a visually interesting and aesthetically pleasing built environment that respects the rural nature of the County," (Colusa County, 2012). Therefore, construction and operation of the Field Office Maintenance Yard, Sites Electrical Switchyard, and Holthouse Reservoir Electrical Switchyard have the potential to be inconsistent with the General Plan. This would, therefore, result in a **potentially significant impact,** when compared to Existing Conditions and the No Project/No Action Alternative.

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

Construction of the Project facilities listed above would create new temporary sources of reflective daytime glare and nighttime lighting. Building materials used to construct the Sites Pumping/Generating Plant, Field Office Maintenance Yard, Sites Electrical Switchyard, and Holthouse Reservoir Electrical Switchyard 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. Construction activities during early morning and evening hours would require the use of vehicle and perimeter lighting. However, construction lighting would be temporary, and would therefore, result in a **less-than-significant impact,** when compared to Existing Conditions and the No Project/No Action Alternative

Operation and maintenance of the facilities would also require new sources of permanent access and safety lighting. Therefore, operation of the proposed facilities could potentially be inconsistent with General Plan Policy OSR 1-14. As discussed in **Impact Vis-1**, views of the facility locations would be largely obstructed due to terrain and lack of public access. Visual change in sources of light and glare would be high; however, because visual sensitivity would be low, the impact on day and nighttime views in the area is considered a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

Terminal Regulating Reservoir, Terminal Regulating Reservoir Pumping/Generating Plant, Terminal Regulating Reservoir Electrical Switchyard, Terminal Regulating Reservoir Pipeline, Terminal Regulating Reservoir Pipeline Road, Delevan Pipeline Electrical Switchyard, and Glenn-Colusa Irrigation District Canal Connection to the Terminal Regulating Reservoir

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

There are no officially designated scenic vista points in Colusa County; therefore, the proposed TRR and its associated facilities listed above would be consistent with the Colusa County 2030 General Plan. During construction of the TRR and its associated facilities, 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, some of the vehicles and equipment used may be similar to those used in the transport of agricultural goods along the same roads. Construction of the TRR and its associated facilities would be considered a temporary activity, and would, therefore, have a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative**.**

The TRR and its associated facilities would be developed on the valley floor adjacent to the GCID Canal using a combination of excavation and embankment. The proposed reservoir embankments would be approximately six feet above the existing ground surface, which would make the TRR and its associated facilities, with the exception of the TRR Pipeline and TRR Pipeline Road, visually dominant in the landscape due to the minimal topographic variation and absence of large water features within this area, resulting in a moderate to high visual change. Views from adjacent residents and roads of scenic undeveloped hills to the west would have the limited potential to be obstructed during operations depending on their distance from the proposed facilities and viewing angle, resulting in moderate visual sensitivity. Operation and maintenance of these facilities would, therefore, result in a **potentially significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-2** discussion for the Sites Reservoir Inundation Area. That discussion is also applicable to the TRR and its associated facilities.

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 Canal Connection to it 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. However, the proposed location for the TRR and its associated facilities is currently subject to the continual presence of tractors, trucks, and other equipment used in agriculture, although of differing types and intensity, so viewers may not be sensitive to the presence of construction equipment. This would result in a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

The proposed TRR and its associated facilities would cover approximately 200 acres of existing agricultural land, creating a moderate to high visual contrast, when compared to Existing Conditions. The new waterbody would be perceived as distinct to the area, which is characterized by agricultural fields, rural residences, and several small water storage facilities and water conveyance systems, due to its scale and designed height of approximately six feet above the existing ground level. The presence of the proposed TRR, its associated facilities (with the exception of the TRR Pipeline and TRR Pipeline Road), and the GCID Canal Connection and its operation and maintenance would, therefore, have the potential to degrade its moderate visual quality due to a substantial and distinct change from its existing use. The proposed TRR and its associated facilities (with the exception of the TRR Pipeline and TRR Pipeline Road) would also be inconsistent with Colusa County 2030 General Plan Policy OSR 1-12, which requires that visually intrusive development near scenic resources be limited in order to minimize visual impacts to the greatest extent feasible (Colusa County, 2012). This would, therefore, result in a **potentially significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

Construction of the TRR, its associated facilities, and the GCID Canal Connection 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. In addition, materials that would be used to construct the TRR Pumping/Generating Plant, TRR Electrical Switchyard, and Delevan Pipeline Electrical Switchyard 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. This impact on daytime and nighttime views is considered **potentially significant** due to the proximity of the nearby residences, when compared to Existing Conditions and the No Project/No Action Alternative.

Approximately 200 acres of agricultural land would be permanently converted to a regulating reservoir. This would expose area residents to a substantial new potential source of daytime and nighttime glare due to the reservoir's designed-embankment height of six feet. The reservoir would also create a potential source of glare to aircraft flying over the new reservoir, similar to what occurs when they pass over existing reservoirs. In addition, operation and maintenance of the facilities would require new sources of permanent access and safety lighting. Therefore, operation of the proposed TRR and its associated facilities has the potential to be inconsistent with General Plan Policy OSR 1-14. The visual change in sources of light and glare would be moderate to high, and visual sensitivity would be moderate to high due to the number of residents located in the vicinity of the proposed facilities. This impact is considered **potentially significant**, when compared to Existing Conditions and the No Project/No Action Alternative.

Delevan Transmission Line

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

There are no officially designated scenic vista points in Colusa County; therefore the proposed Delevan Transmission Line would be consistent with the Colusa County 2030 General Plan. Construction of the Delevan Transmission Line would be moderately to highly visible by motorists and residents at approximately 30 residences within one mile of the proposed alignment due to lack of topography and mature vegetation along the alignment. Construction of the Transmission Line would create temporary changes in the views of and from the construction work site. Construction activities would introduce heavy equipment and associated vehicles into the viewshed of the proposed transmission line alignment. However, the area is currently subject to the continual presence of large agricultural equipment, although of differing types and intensity. Construction of the Delevan Transmission Line would, therefore, result in a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

The proposed Transmission Line would not likely substantially impair views or visually dominate the viewshed due to the wide spacing and massing of the towers. In addition, views of the open agricultural land are fairly homogenous and several existing transmission lines already traverse the area. The Transmission Line would be aligned approximately 200 yards north of the northern boundary of the Delevan National Wildlife Refuge; however, public views both of and from the refuge on the north are obstructed by mature trees demarking the refuge boundary. The Transmission Line would terminate near the western bank of the Sacramento River, at the Delevan Pipeline Intake Facility. The Transmission 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. Operation and maintenance activities would consist of periodic inspections of the Transmission Line and towers by inspectors via truck, and repairs, as necessary. Transmission Line operation and maintenance activities would be visible by motorists and residents within one mile of the proposed alignment causing moderate to high sensitivity; however, due to the expected periodic timing and short duration at any given tower, this would be considered a low to moderate visual change. There

would, therefore, be a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-2** discussion for the Sites Reservoir Inundation Area. That discussion is also applicable to the Delevan Transmission Line.

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

Refer to the **Impact Vis-1** discussion for the Delevan Transmission Line. There are several existing transmission lines and towers that traverse the flat agricultural land of Colusa County; therefore, a new transmission line would be compatible with the existing landscape, and would generate a low to moderate visual change. Visual sensitivity of residents and motorists would be moderate. Colusa County 2030 General Plan Policy CON 2-14 states that "Any proposed pipeline or transmission line within the county shall be aligned so that interference with agriculture is minimized," (Colusa County, 2012). The Delevan Transmission Line would be aligned above agricultural land, and its permanent impact would be limited to the transmission towers, which would not degrade a substantial portion of agricultural acreage. Therefore, the alignment of the proposed Delevan Transmission Line would be consistent with the Colusa County General Plan, resulting in a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

Construction of the Delevan Transmission Line 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 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 **potentially significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

Operation and maintenance of the proposed Transmission Line may require permanent safety lighting. Therefore, operation of the proposed Delevan Transmission Line could potentially be inconsistent with General Plan Policy OSR 1-14. However, visual change in sources of light and glare would be low to moderate due to the spacing of the transmission towers and would depend on viewing angle and distance, and visual sensitivity would be moderate due to the number of residents and motorists in the vicinity of the proposed facilities. This would be a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

Delevan Pipeline

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

Refer to the **Impact Vis-1** discussion for construction impacts of the Delevan Transmission Line. The Delevan Pipeline would follow the same alignment and fall within the same construction disturbance area as the proposed Transmission Line from the Delevan Pipeline Intake Facilities to the TRR. From the

TRR to Holthouse Reservoir, the three-mile-long pipeline would diverge from the proposed Transmission Line alignment; however, the existing affected environment for both alignments between the TRR and the Holthouse Reservoir Complex is similar. Therefore, construction impacts would be similar.

Operation and maintenance of the Delevan Pipeline would not affect existing views of or from the Pipeline alignment because the pipeline would be installed underground. Above-ground structures associated with the Pipeline include blow-off structures, air valve structures, and outlet and energy dissipater structures. These installed structures would be spaced at intervals along the proposed Pipeline, and would be visually subordinate to the existing surrounding agricultural land uses. Operations and maintenance activities would consist of periodic inspections and repairs of the Pipeline and above-ground structures that would require the use of vehicles. These activities and the presence of the above-ground pipeline structures would not affect a scenic vista. Therefore, operations and maintenance of the Delevan Pipeline would result in **no impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-2** discussion for the Sites Reservoir Inundation Area. That discussion is also applicable to the Delevan Pipeline.

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

Agricultural land and open space are considered to be a scenic area according to the Colusa County 2030 General Plan. The alignment of the proposed Delevan Pipeline through existing agricultural land uses may be inconsistent with General Plan Policy CON 2-14, which states that "Any proposed pipeline or transmission line within the county shall be aligned so that interference with agriculture is minimized" (Colusa County, 2012). Therefore, construction of the Delevan Pipeline would result in a **potentially significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

Refer to the **Impact Vis-1** discussion for operation and maintenance of the Delevan Pipeline. Following Project completion, the disturbed agricultural land used for temporary construction staging would be restored to pre-Project conditions, as feasible, which would be consistent with Colusa County General Plan policy. This would, therefore, result in a **less-than-significant impact** on the existing visual quality of the agricultural surroundings, when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-4** discussion for construction impacts of the Delevan Transmission Line. The Pipeline would not require installation of structures that would permanently emit light or glare. Therefore, operation of the proposed Delevan Pipeline would be consistent 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 Existing Conditions and the No Project/No Action Alternative.

Delevan Pipeline Intake Facilities

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

There are no officially designated scenic vista points in Colusa County; therefore the proposed Delevan Pipeline Intake Facilities would be consistent with the Colusa County 2030 General Plan. The Delevan Pipeline would terminate at the Sacramento River, adjacent to the existing Maxwell Irrigation District Pumping Plant (a large industrial facility that results in the area being of low to moderate visual quality). Construction of the proposed Delevan Pipeline Intake Facilities would introduce heavy equipment and vehicles, as well as construction workers, into the area.

Although much of the Sacramento River is generally considered to be a scenic vista, public views of the proposed Delevan Pipeline Intake Facilities 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 Facilities would result in a moderate visual change from the existing undeveloped riverbank. Despite the moderate to high visual quality of the area surrounding the existing pumping plant, the visual sensitivity would be low to moderate 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. This would result in a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

Refer to the **Impact Vis-2** discussion for the Sites Reservoir Inundation Area. That discussion is also applicable to the Delevan Pipeline Intake Facilities.

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

Refer to the **Impact Vis-1** discussion. In addition, the proposed Delevan Pipeline Intake Facilities would be consistent with Colusa County 2030 General Plan Policy OSR 1-12 requiring that visual intrusive development near scenic resources be limited to minimize visual impacts. The facilities would be consistent with the policy due to the lack of public access in the vicinity of the proposed facilities, and the expected few viewers of the facilities from the river.

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

Refer to the **Impact Vis-1** discussion. Construction of the Delevan Pipeline Intake 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.

Operation and maintenance of the facilities may require new sources of permanent safety lighting. Therefore, operation of the proposed Delevan Pipeline Intake Facilities has the potential to be inconsistent with General Plan Policy OSR 1-14. The visual change in sources of light and glare would be moderate; however, viewer sensitivity would be low due to limited public views of the proposed facility location. Therefore, the impact on day and nighttime views in the area is considered **less than significant**, when compared to Existing Conditions and the No Project/No Action Alternative.

Project Buffer

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

There are no officially designated scenic vista points in Colusa County; therefore, the presence of the Project Buffer would be consistent with the Colusa County 2030 General Plan.

Construction of the Project Buffer would include demolition of existing structures, removal of vegetation to create a fuel break, and construction of a fence. The activities would require on-site equipment of varying sizes. The fence would consist of standard three-strand barbed wire fences with posts along the Project Buffer boundary where fences do not already exist. Equipment that would be used for structures and vegetation removal and installing fences to delineate between Project parcels and adjacent non-Project parcels are both typical for the Project's rural setting. These construction and demolition activities would be a temporary impact. Therefore, construction and demolition activities for the Project Buffer fence would result in a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

No Project facilities are proposed to be located within the Project Buffer. The only Project operation and maintenance activities that would occur within the Project Buffer would be fence maintenance and periodic boundary fuel break construction and maintenance. In addition, public access would be prohibited. The fence would create a line across the landscape, but would be in character with existing fences in the area (i.e., having three-strand barbed wire strung on wooden posts). Although the visual sensitivity along the Project Buffer boundary ranges from low to high, the fence installation and periodic fuel break maintenance would be considered a low visual change. Therefore, the presence of the fence and the operation/maintenance activities that would occur within the Project Buffer would result in a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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

No Project facilities would be located within a State Scenic Highway, so the Project Buffer and its associated fuel break maintenance activities and fence would also not be located within such a designated corridor, nor would it affect scenic resources within such a corridor. Therefore, construction, operation, and maintenance of the Project Buffer would result in **no impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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 that are located within the Project Buffer but outside of the associated Project facility footprints, and the installation of a fence. Structures include houses, barns, shops, and sheds adjacent to the proposed Sites Reservoir Inundation Area. 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, and while at each Project facility, it would not substantially degrade the visual character or quality of that area, resulting in a **less-than-significant impact**, when compared to Existing Conditions or the No Project/No Action Alternative.

The presence of the Project Buffer three-strand barbed wire fence and the periodic fuel break and fence maintenance that would occur within this area would not substantially degrade the visual character or quality of that area and would be consistent with General Plan policies of Colusa County and Glenn County, resulting in a **less-than-significant impact** during Project operation and maintenance, when compared to Existing Conditions and the No Project/No Action Alternative.

Impact Vis-4: A New Source of Substantial Light or Glare which 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 may be visible to motorists for only short periods of time), this is considered a **less-than-significant impact**, when compared to Existing Conditions and the No Project/No Action Alternative.

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 proposed Project Buffer would be consistent with the General Plan policies of Colusa County and Glenn County, and **no impact** would occur during Project operation and maintenance, when compared to Existing Conditions and the No Project/No Action Alternative.

30.3.7 Impacts Associated with Alternative B

30.3.7.1 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.

30.3.7.2 Primary Study Area – Alternative B

Construction, Operation, and Maintenance Impacts

The following Project facilities are included in both Alternatives A and B. These facilities would require the same construction methods and operation and maintenance activities regardless of alternative, and would, therefore, result in the same construction, operation, and maintenance impacts to visual resources:

- Recreation Areas
- Sites Pumping/Generating Plant

- Sites Electrical Switchyard
- Tunnel from Sites Pumping/Generating Plant to Sites Reservoir Inlet/Outlet Structure
- Sites Reservoir Inlet/Outlet Structure
- Field Office Maintenance Yard
- Holthouse Reservoir Complex
- Holthouse Reservoir Electrical Switchyard
- GCID Canal Facilities Modifications
- GCID Canal Connection to the TRR
- TRR
- TRR Pumping/Generating Plant
- TRR Electrical Switchyard
- TRR Pipeline
- TRR Pipeline Road
- Delevan Pipeline
- Delevan Pipeline Electrical Switchyard

If Alternative B is implemented, the footprints and construction disturbance areas of Sites Reservoir and Dams, the Road Relocations and South Bridge, and the Delevan Transmission Line would differ from Alternative A. If Alternative B is implemented, the Sites Reservoir Inundation Area would increase to a 1.81-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, than that of the Alternative A reservoir, depending on the existing slope of the terrain. The 1.81-MAF reservoir proposed for Alternative B would necessitate the relocation and/or resizing of several Project features including the access roads, South Bridge, Golden Gate Dam, and Sites Dam, to accommodate an increased water elevation during Project operations. The larger reservoir would also require larger dams and two additional saddle dams. In addition, the Delevan Pipeline Intake Facilities 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 type of construction, operation, and maintenance activities that were described for Alternative A. They would, therefore, have the same impact on 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**) as described for Alternative A.

The boundary of the Project Buffer would be the same for Alternatives A and B, but because the footprints of some of the Project facilities that are surrounded by the Project Buffer would differ between the alternatives, the acreage of land within the Project Buffer would also differ. However, this difference in the size of the area included within the buffer would not change the type of construction, operation, and maintenance activities that were described for Alternative A. It would, therefore, have the same impact on 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**) as described for Alternative A.

30.3.8 Impacts Associated with Alternative C

30.3.8.1 Extended and Secondary Study Areas – Alternative C

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.

30.3.8.2 Primary Study Area – Alternative C

Construction, Operation, and Maintenance Impacts

The following Primary Study Area Project facilities are included in Alternatives A, B, and C. These facilities would require the same construction methods and operation and maintenance activities regardless of alternative, and would, therefore, result in the same construction, operation, and maintenance impacts to visual resources:

- Recreation Areas
- Sites Pumping/Generating Plant
- Sites Electrical Switchyard
- Tunnel from Sites Pumping/Generating Plant to Sites Reservoir Inlet/Outlet Structure
- Sites Reservoir Inlet/Outlet Structure
- Field Office Maintenance Yard
- Holthouse Reservoir Complex
- Holthouse Reservoir Electrical Switchyard
- GCID Canal Facilities Modifications
- GCID Canal Connection to the TRR
- TRR
- TRR Pumping/Generating Plant
- TRR Electrical Switchyard
- TRR Pipeline
- TRR Pipeline Road
- Delevan Pipeline
- Delevan Pipeline Electrical Switchyard

The Alternative C design of the Delevan Transmission Line and Delevan Pipeline Intake Facilities is the same as described for Alternative A. These facilities would require the same construction methods and operation and maintenance activities regardless of alternative, and would, therefore, result in the same construction, operation, and maintenance impacts to visual resources as described for Alternative A.

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 result in the same construction, operation, and maintenance impacts to visual resources as described for Alternative B.

The boundary of the Project Buffer would be the same for Alternatives A, B, and C, but because the footprints of some of the Project facilities that are surrounded by the Project Buffer would differ between the alternatives, the acreage of land within the Project Buffer would also differ. However, this difference in the size of the area included within the buffer would not change the type of construction, operation, and maintenance activities that were described for Alternative A.

30.4 Mitigation Measures

Mitigation measures are provided below and summarized in Table 30-3 for the impacts that have been identified as significant or potentially significant.

Table 30-3
Summary of Mitigation Measures for NODOS Project Impacts to Visual Resources

Impact	Associated Project Facility	LOS Before Mitigation	Mitigation Measure	LOS After Mitigation
Impact Vis-1: A Substantial Adverse Effect on a Scenic Vista	South Bridge, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, Delevan Pipeline Electrical Switchyard, GCID Canal Connection to the TRR	Potentially Significant	No Feasible Mitigation	Significant and Unavoidable
Impact Vis-3: Substantial Degradation of the Existing Visual Character or Quality of the Site and its Surroundings	Road Relocations & South Bridge, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Electrical Switchyard, GCID Canal Connection to the TRR; Delevan Pipeline (construction and maintenance)	Potentially Significant	Mitigation Measure Vis-3a: Reduce Construction and Maintenance Impacts Causing Adverse Temporary Impacts on Visual Quality of the Site	Less than Significant
	Sites Reservoir Inundation Area, Road Relocations & South Bridge, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, Delevan Pipeline Electrical Switchyard, GCID Canal Connection to the TRR (operation)	Potentially Significant	Mitigation Measure Vis-3b: Reduce Operational Impacts Causing Adverse Permanent Impacts on Visual Quality of the Site	Significant and Unavoidable

Table 30-3
Summary of Mitigation Measures for NODOS Project Impacts to Visual Resources

Impact	Associated Project Facility	LOS Before Mitigation	Mitigation Measure	LOS After Mitigation
	Field Office Maintenance Yard, Sites Electrical Switchyard, Holthouse Reservoir Electrical Switchyard (operation)	Potentially Significant	Mitigation Measure Vis-3b: Reduce Operational Impacts Causing Adverse Permanent Impacts on Visual Quality of the Site	Less than Significant
Impact Vis-4: Introduce a New Source of Substantial Light or Glare which Would Adversely Affect Day or Nighttime Views in the Area	Recreation Areas; South Bridge; TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Electrical Switchyard, GCID Canal Connection to the TRR; Delevan Transmission Line (construction and maintenance)	Potentially Significant	Mitigation Measure Vis-4a: Reduce Construction and Maintenance Impacts Causing Substantial Light or Glare	Less than Significant
	Recreation Areas; Road Relocations & South Bridge; TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, Delevan Pipeline Electrical Switchyard, GCID Canal Connection to the TRR (operation)	Potentially Significant	Mitigation Measure Vis-4b: Reduce Operational Impacts Causing Substantial Light or Glare	Less than Significant
	Sites Reservoir Inundation Area (operation)	Potentially Significant	No Feasible Mitigation	Significant and Unavoidable

Note:
LOS = Level of Significance

Mitigation Measure Vis-3a: Reduce Construction and Maintenance Impacts Causing Adverse Temporary Impacts on Visual Quality of the Site

To minimize the temporary construction impacts on visual resources due to substantial degradation of existing visual quality from construction and maintenance of the Road Relocations, South Bridge, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Electrical Switchyard, GCID Canal Connection to the TRR, and Delevan Pipeline, DWR and Reclamation shall:

- Water areas where dust is generated, particularly along unpaved haul routes and during earth-moving activities, to reduce impacts to views and the landscape caused by dust.
- Prohibit unnecessary ground disturbance outside of the construction disturbance area.
- Revegetate and restore disturbed ground surfaces at each Project facility to their original condition to the extent feasible.

Mitigation Measure Vis-3b: Reduce Operational Impacts Causing Adverse Permanent Impacts on Visual Quality of the Site

To minimize permanent impacts on visual resources due to substantial degradation of existing visual quality from operation of the Road Relocations and South Bridge, Field Office Maintenance Yard, Sites Electrical Switchyard, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, Delevan Pipeline Electrical Switchyard, GCID Canal Connection to the TRR, and Holthouse Reservoir Electrical Switchyard, DWR and Reclamation shall:

- Use native trees, bushes, and shrubs for screening at the Project facilities that may substantially degrade the existing visual character of the site(s), in a manner that does not compromise facility safety and access.
- Incorporate high quality site design and architecture in order to create an aesthetically pleasing built environment that does not detract from the rural nature of the surroundings.
- Retaining walls and erosion control devices or structures shall be sited, designed, and constructed to avoid detracting from the scenic quality of the area.

Mitigation Measure Vis-4a: Reduce Construction and Maintenance Impacts Causing Substantial Light or Glare

To minimize impacts on day or nighttime views due to substantial light or glare expected from construction and maintenance of the Recreation Facilities, South Bridge, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline Electrical Switchyard, GCID Canal Connection to the TRR, and Delevan Transmission Line, DWR and Reclamation shall:

- Minimize light scatter and glare from portable temporary light sources that would be used for nighttime construction by using shielded and directional lighting, and install temporary visual barriers, as needed, to prevent light spill from equipment lighting in areas with sensitive receptors.

- Design, construct, and finish all new buildings and structures using non-reflective materials, non-glare finishes, and colors that would blend with the natural environment and not create a new source of glare.
- Design the transmission line structures to be similar in appearance to the existing transmission lines in the Project vicinity to the extent feasible. Use non-specular conductors and non-reflective and non-refractive insulators.
- Use minimal Project construction signs; signs that would be installed shall be made of non-glare materials, finishes, and unobtrusive colors to the extent possible. The design of any signs required by safety regulations shall conform to the criteria established by those regulations.

Mitigation Measure Vis-4b: Reduce Operations Impacts Causing Substantial Light or Glare

To minimize impacts on day or nighttime views due to substantial light or glare expected during operation of the Recreation Facilities, Road Relocations and South Bridge, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, Delevan Pipeline Electrical Switchyard, and GCID Canal Connection to the TRR, DWR and Reclamation shall:

- Use native trees, bushes, and shrubs for screening at Project facilities that may generate new sources of light or glare, in a manner that does not compromise facility safety and access.
- Minimize nighttime lighting to areas required for safety, security, and operations, and shield lighting from public view to the extent possible. Timers and sensors shall be used to minimize the amount of time that lights are on in areas where lighting is not normally needed for safety, security, or operation. Use shielded and directional permanent lighting.
- Use minimal Project signs; signs that would be installed shall be made of non-glare materials, finishes, and unobtrusive colors to the extent possible. The design of any signs required by safety regulations shall conform to the criteria established by those regulations.
- Design and install guardrails and other roadway fixtures, including retaining walls, safety barriers, light standards, and other structures to adequately provide for the safety of the motorist using non-glare materials, unobtrusive colors, and flat finishes to minimize potential glare.

Implementation of **Mitigation Measures Vis-3a, Vis-3b**, **Vis-4a**, and **Vis-4b** would reduce the level of significance of visual resource impacts from the following Project facilities to **less than significant**: Recreation Areas, Field Office Maintenance Yard, Sites Electrical Switchyard, TRR Pipeline, TRR Pipeline Road, Delevan Pipeline, and Delevan Transmission Line.

There is no feasible mitigation to reduce all impacts to visual resources from the following Project facilities to a less than significant level: Sites Reservoir Inundation Area, Road Relocations and South Bridge, Holthouse Reservoir Electrical Switchyard, TRR, TRR Pumping/Generating Plant, TRR Electrical Switchyard, Delevan Pipeline Electrical Switchyard, and GCID Canal Connection to the TRR. The impacts to visual resources at those locations would remain **significant and unavoidable**.

30.5 References

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Figures

Funks Creek
Hunters Creek
North Road
Saddle Dam
GLENN COUNTY
COLUSA COUNTY
SITES RESERVOIR
Peninsula Hills
T-C Canal
GCID Canal
Golden Gate Dam
Funks Creek
Stone Corral
Sites
Sites Dam
Antelope Island
Maxwell Sites Road
Stone Corral Creek
Comm Towers
Grapevine Creek
Lurline Headwaters
Antelope Creek

1 3 2 4 5 6-8 9 10 11,12 13 14 15 16 17 18 19 20 33

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
- Delevan Transmission Line
- Existing Transmission Line
- Delevan Pipeline
- TRR Pipeline
- Existing Access Roads

Proposed Project Roads

- Gravel
- Paved
- South Bridge

N

0 0.375 0.75 1.5 2.25 3 Miles

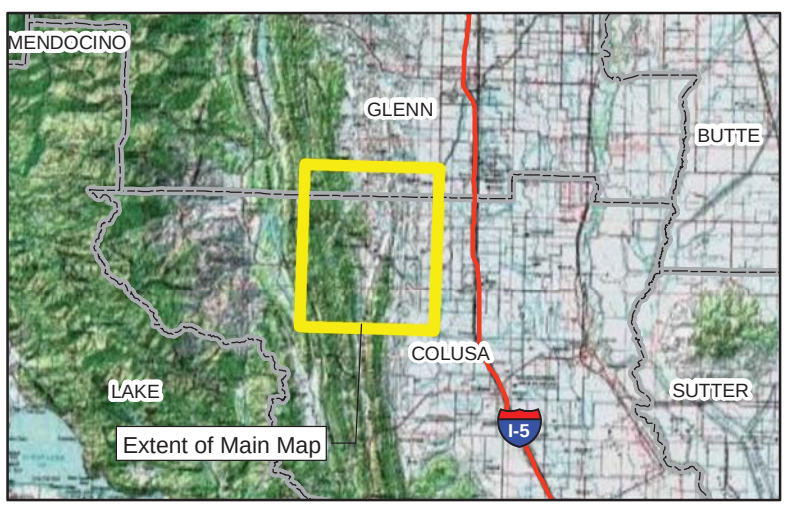


FIGURE 30-1A
Sites Reservoir
Photo Locations
North-of-the-Delta Offstream Storage Project

Notes: Aerial Imagery NAIP 2010.

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
- T-C Canal Bypass
- Existing Gas Line
- Existing Transmission Line
- Existing Access Roads

N

0 0.2 0.4 0.8 1.2 1.6 Miles

Notes: Aerial Imagery NAIP 2010.

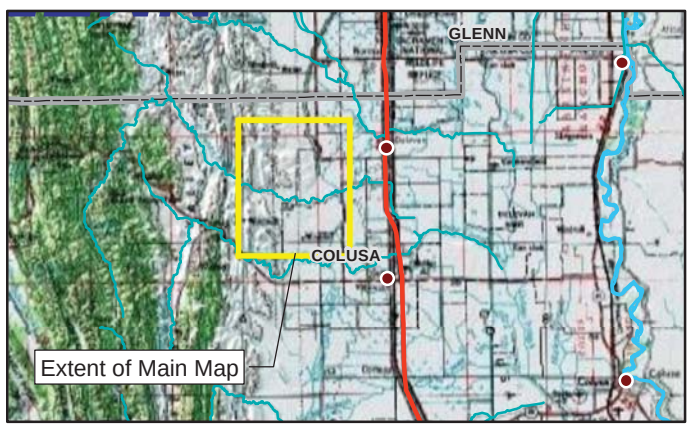
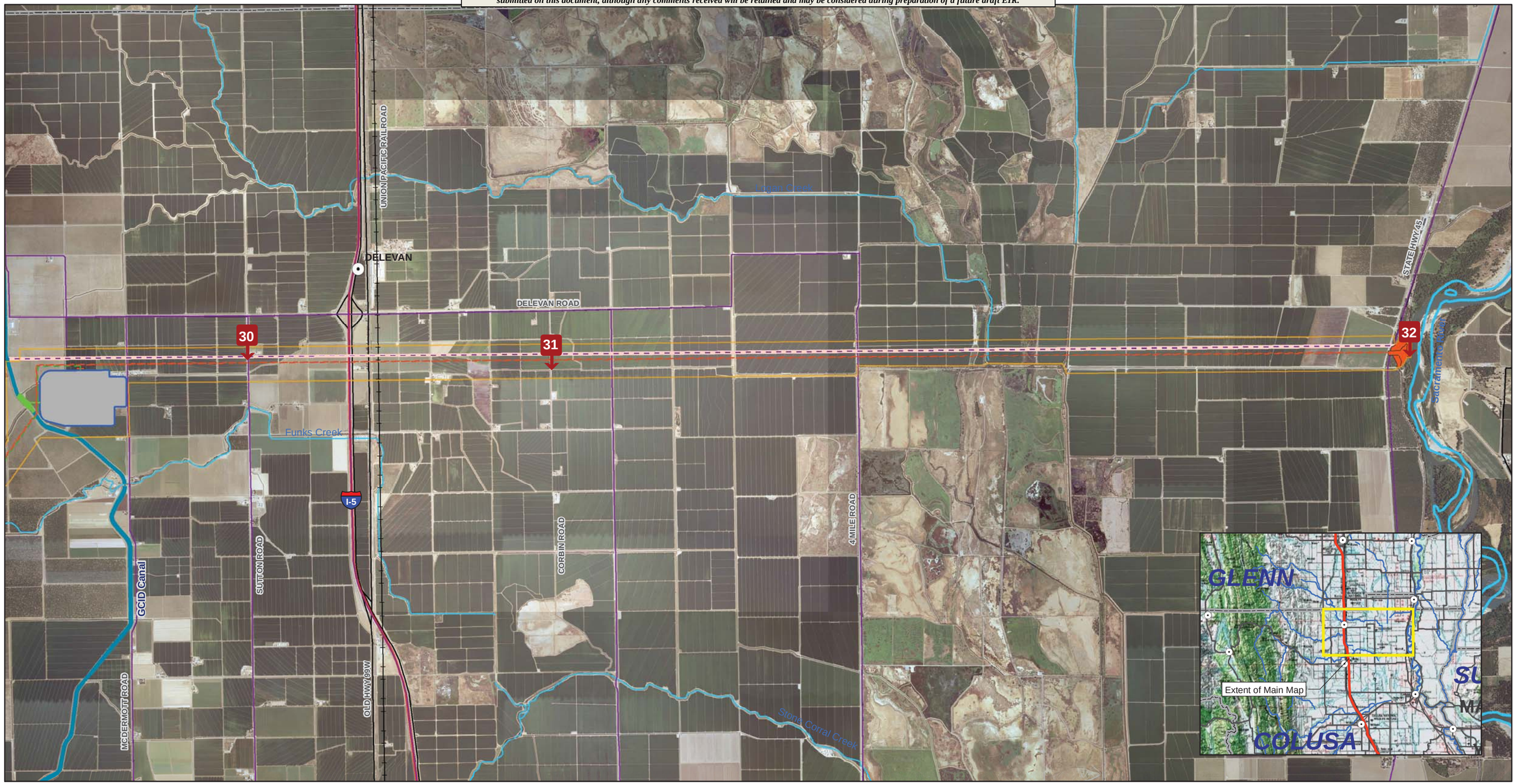


FIGURE 30-1B
Holthouse Reservoir Complex and TRR Complex Photo Locations
North-of-the-Delta Offstream Storage Project



Legend

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

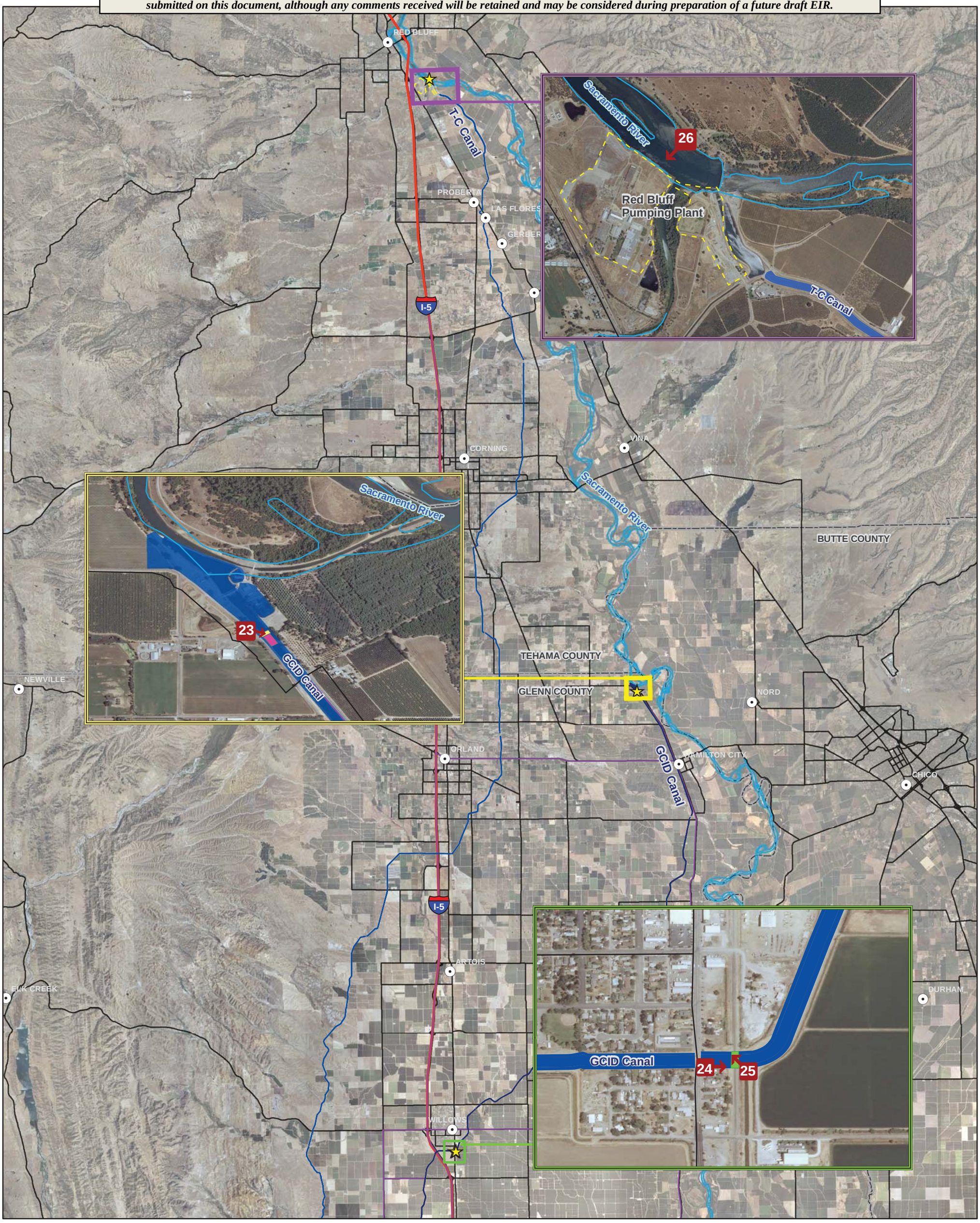
N

0 0.25 0.5 1 1.5 2 Miles

Notes: Aerial Imagery NAIP 2010.

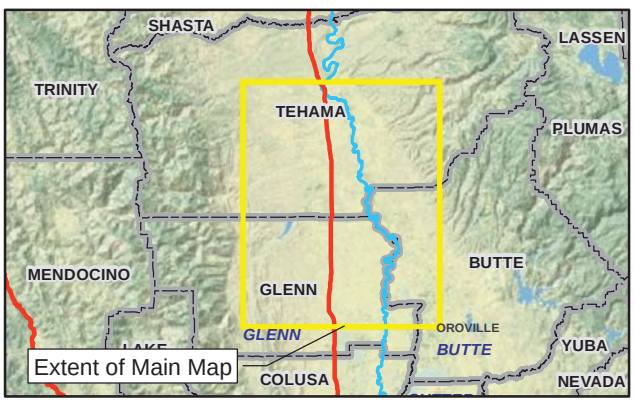
Path: C:\Users\Jgolman\ArcGIS\NODOS\Photos\PhotoPointsFig\30-1C_EasternTLinePipelineSacRiverPhotoMap_Rev1.mxd

FIGURE 30-1C
Delevan Transmission Line, Delevan Pipeline and Delevan Pipeline Intake/Discharge Facilities Photo Locations
North-of-the-Delta Offstream Storage Project



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



N

0 1.5 3 6 9 12 Miles

Notes: Aerial Imagery NAIP 2010.

FIGURE 30-1D
RBPP and GCID Facilities Photo Locations
North-of-the-Delta Offstream Storage Project

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 Photos
North-of-the-Delta Offstream Storage Project

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
North-of-the-Delta Offstream Storage Project

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
North-of-the-Delta Offstream Storage Project

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
North-of-the-Delta Offstream Storage Project

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
North-of-the-Delta Offstream Storage Project

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

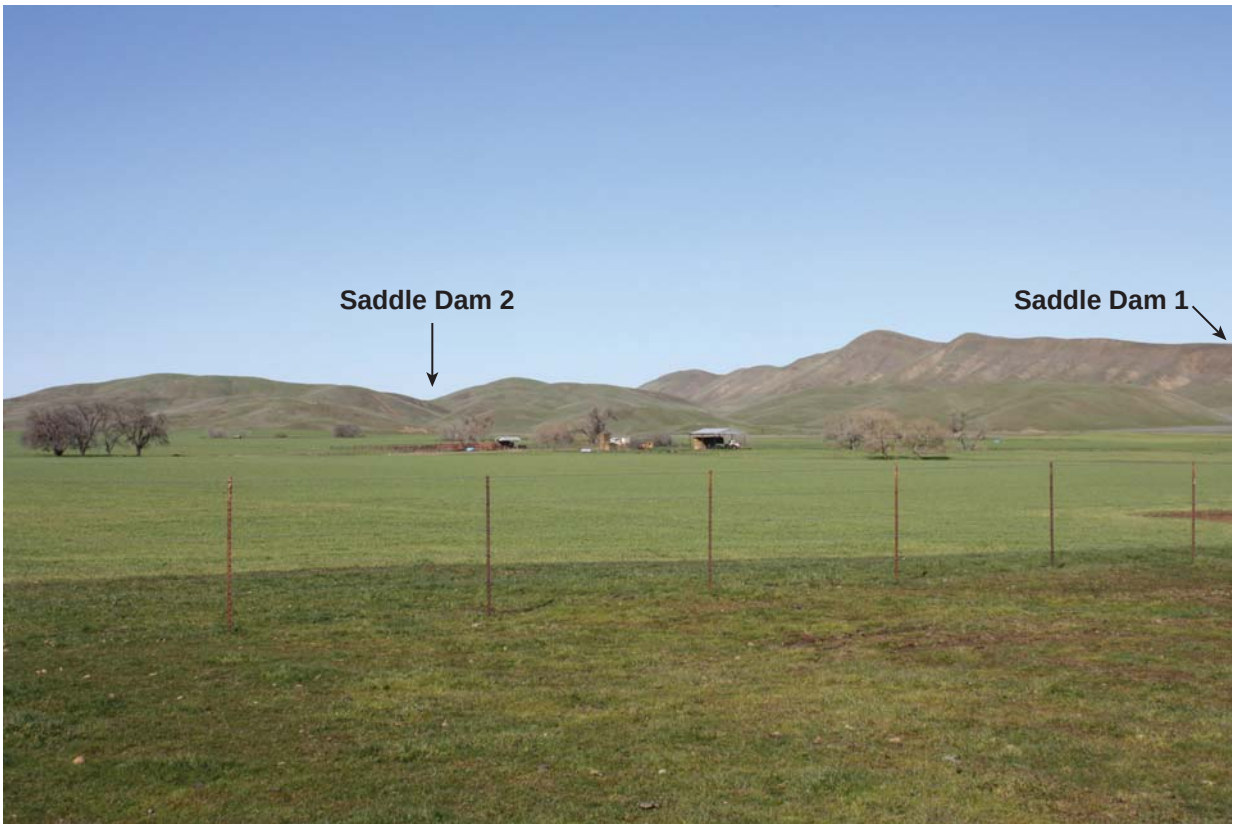


Photo 11: Looking north from Peterson Road toward Saddle Dams 1 and 2 locations from inside of the inundation area. Saddle Dam 1 would be located immediately adjacent to Logan Ridge on the right side of the photo. Saddle Dam 2 would be located to the left of center of the photo.

FIGURE 30-2F
Sites Dam and Saddle Dams 1 and 2
Landscape Character Photos
North-of-the-Delta Offstream Storage Project

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 Photos
North-of-the-Delta Offstream Storage Project

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 Photos
North-of-the-Delta Offstream Storage Project

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 Photos
North-of-the-Delta Offstream Storage Project

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
North-of-the-Delta Offstream Storage Project

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
North-of-the-Delta Offstream Storage Project

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
North-of-the-Delta Offstream Storage Project

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 Photos
North-of-the-Delta Offstream Storage Project

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 Photos
North-of-the-Delta Offstream Storage Project

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 Photos
North-of-the-Delta Offstream Storage Project

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
North-of-the-Delta Offstream Storage Project

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
North-of-the-Delta Offstream Storage Project

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
North-of-the-Delta Offstream Storage Project

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

FIGURE 30-2S
Delevan Transmission Line and Delevan Pipeline
Landscape Character Photos
North-of-the-Delta Offstream Storage Project

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

FIGURE 30-2T
Delevan Transmission Line and Delevan Pipeline
Landscape Character Photos
North-of-the-Delta Offstream Storage Project

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 and Discharge Facilities and Communication Towers Landscape Character Photos
North-of-the-Delta Offstream Storage Project