

**Appendix B:
Natural Environment Study for the County Road 66B Bridge Replacement Project**

COUNTY OF GLENN CR 66B BRIDGE REPLACEMENT PROJECT



Natural Environment Study

Glenn County, California
Rancho Larkin's Children Land Grant
Princeton Quadrangle
District 03-GLE-66B

BRLO-5911(063)

November 2020



Natural Environment Study

STATE OF CALIFORNIA

Department of Transportation

Caltrans District 3

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Summary

The Glenn County Public Works Agency, in cooperation with the Federal Highway Administration (FHWA) and the California Department of Transportation (Caltrans), is proposing to replace Bridge No. 11C-0068 on County Road (CR) 66B over Colusa Drain. The primary objective of this project is to replace the existing structurally deficient bridge with a new wider structure. The project is funded through the Federal Aid Highway Bridge Program (HBP) and Federal Toll Credits. The bridge was last inspected in February 2016 and found to be structurally deficient with a sufficiency rating of 55.7.

Land within the Biological Study Area (BSA) includes barren roadway, annual grassland, rice, and riverine habitat. During the site visit, 12 invasive plant species recognized by the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) and/or the California Invasive Plant Council (Cal-IPC) were identified within the BSA. Special-status species that have the potential to occur within the BSA include a variety of bird and raptor species protected by the Migratory Bird Treaty Act (MBTA), the federal and State threatened giant garter snake (GGG, *Thamnophis gigas*), the State threatened tricolored blackbird (*Agelaius tricolor*), and the western pond turtle (*Emys marmorata*), which is a State Species of Special Concern (SSC).

With the implementation of avoidance and minimization measures, the project will have no impact on the tricolored blackbird and no adverse impact on western pond turtle; however, the project may affect and is likely to adversely affect GGS. Impacts to GGS and GGS habitat will be mitigated for at United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) approved conservation bank. Appropriate steps to prevent the spread of invasive and noxious plants and their seeds to and from the project site will be implemented. Mitigation for impacts to jurisdictional waters of the U.S. (WOTUS) will be addressed through the purchase of credits at a U.S. Army Corps of Engineers (Corps) approved mitigation bank or payment to a Corps approved in-lieu fund. Additionally, a CDFW §1602 Streambed Alteration Agreement and §2081 Incidental Take Permit for GGS, Regional Water Quality Control Board (RWQCB) §401 Water Quality Certification permit, Central Valley Flood Protection Board (CVFPB) encroachment permit, and a Corps Nationwide 3(a) §404 permit shall be obtained for the project.

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List of Abbreviated Terms

APE	Area of Potential Effect
BSA	Biological Study Area
BMP	Best Management Practices
Cal-IPC	California Invasive Plant Council
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGF	California Fish and Game Code
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	United States Army Corps of Engineers
County	Glenn County
CR	County Road
CRPR	California Rare Plant Rank
CWA	Clean Water Act
EPA	Environmental Protection Agency
ESA	Endangered Species Act
GGG	Giant Garter Snake
GIS	Geographic Information System
HBP	Highway Bridge Program
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service

OHW	Ordinary High Water Mark
PCE	Primary Constituent Element
RSP	Rock Slope Protection
RWQCB	Regional Water Quality Control Board
SSC	State Species of Special Concern
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States

1 Introduction

The purpose of the County of Glenn CR 66B Bridge Replacement Project (project) is to replace the existing, structurally deficient bridge over Colusa Drain with a new, wider structure to provide a safe crossing that meets current standards (**Figure 1: Regional Location Map, Figure 2: Project Location Map**). The purpose of this Natural Environment Study (NES) is to evaluate potential project impacts to special-status species and their habitats within the project vicinity.

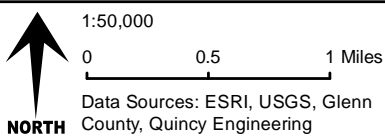
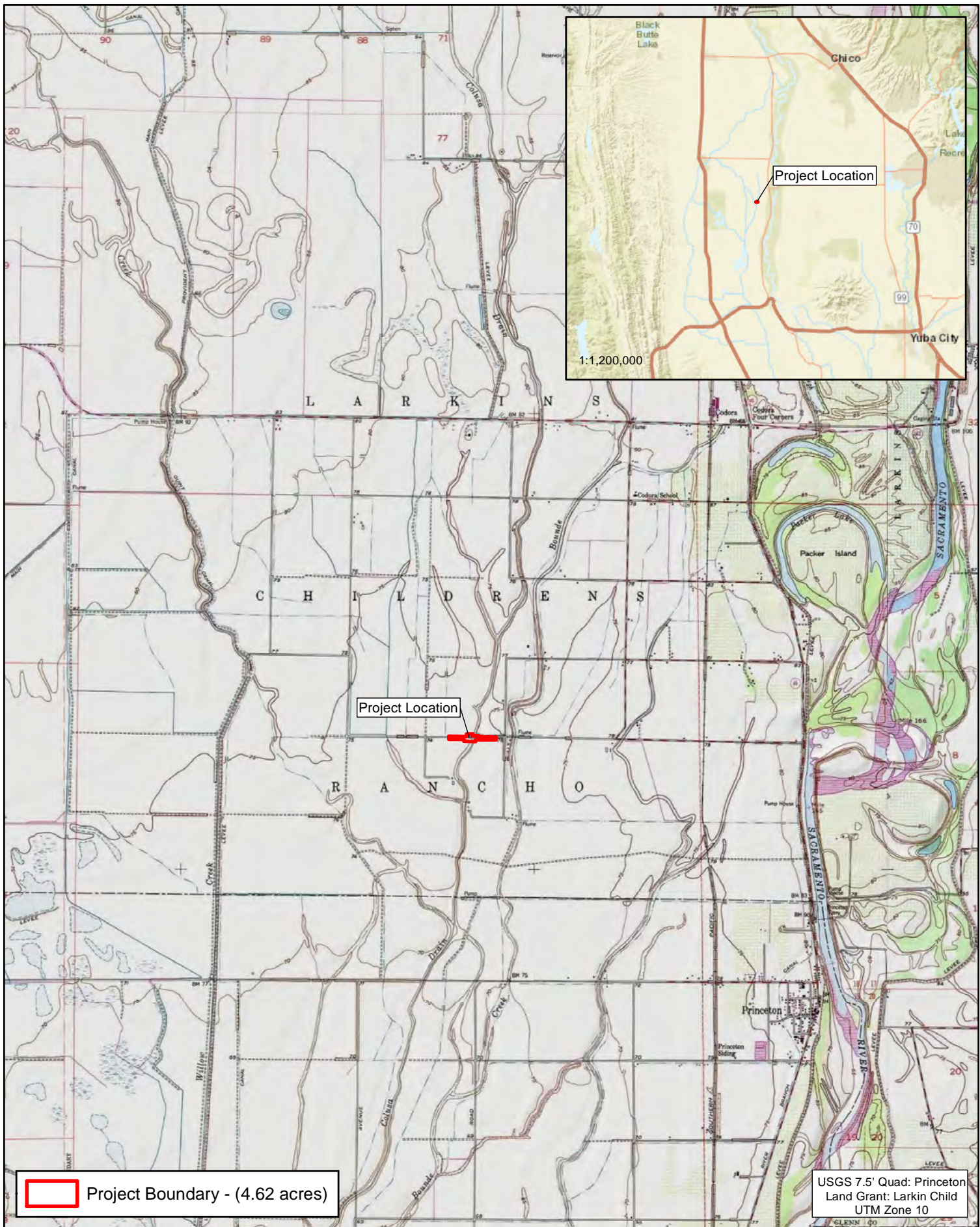
Project History

The project is located in Glenn County, California on Road 66B, which is located in an area surrounded by agricultural rice fields. Traffic is primarily local agricultural use. Caltrans will be the lead agency for National Environmental Policy Act (NEPA) compliance through delegation from the FHWA and Glenn County (County), the owner of the project, will be the lead agency for CEQA compliance. Glenn County will be the maintaining agency of the proposed bridge structure.

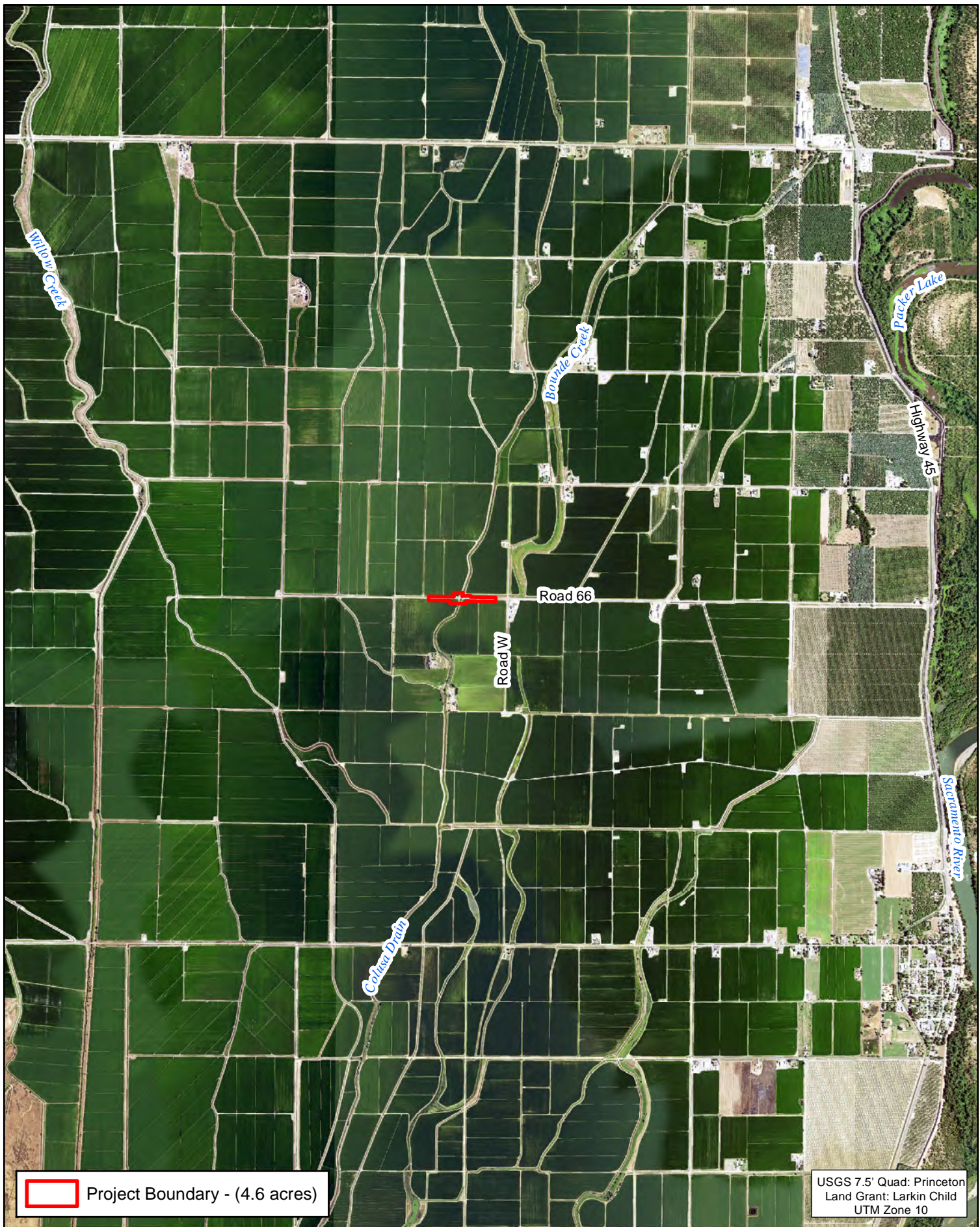
The existing bridge was originally constructed in 1940 and is approximately 54 feet long and 20 feet wide. The bridge is now signed as a single-lane bridge and no longer meets the safety and functional needs of the public who use CR 66B. A broken girder identified during routine inspection in 2013 resulted in the bridge posted for reduced safe load capacity and one lane of traffic. The 18.7 foot clear width is too narrow for two lanes of traffic, and the existing bridge has no shoulder. The existing timber deck is rated in poor condition. The inspection report notes signs of active decay, abrasion wear, and a significant amount of longitudinal checks in the timber members. Bridge replacement is the most effective option available in order to resolve these safety deficiencies.

Project Description

The Glenn County Public Works Agency, in cooperation with the FHWA and Caltrans, is proposing to replace Bridge No. 11C-0068 on CR 66B over Colusa Drain. The primary objective of this project is to replace the existing structurally deficient bridge with a new wider structure. The project is funded through the HBP and Federal Toll Credits. The bridge was last inspected in February 2016 and found to be structurally deficient with a sufficiency rating of 55.7, which qualifies it for rehabilitation under the HBP program; however, bridge replacement can be considered an appropriate “rehabilitation” option if it



County of Glenn CR 66B Bridge 11C-0068
Regional Location
Figure 1



1:35,000

0 1,000 2,000 Feet

Data Sources: ESRI, NAIP 07/11/2016,
USGS, Glenn County, Quincy Engineering

County of Glenn CR 66B Bridge 11C-0068
Project Location
Figure 2

gallaway
ENTERPRISES

GE: #16-078 Map Date: 05/22/18

proves to be the most effective solution, which is the case for this project as FHWA does not typically authorize rehabilitation for structurally deficient timber bridges.

The project site is located in Glenn County, approximately 2 miles west of State Route 45, near the town of Princeton, Colusa County. Traffic is primarily local and supports the agricultural operations in the general vicinity. County Road 66B is bordered by rice fields and crosses the Colusa Drain at the project location.

The existing bridge was originally constructed in 1940 and is approximately 54 feet long and 20 feet wide. The proposed bridge structure will be a single span, precast prestressed concrete voided slab bridge. The new bridge will satisfy the current roadway width geometry standards as well as provide approved bridge railing and approach guardrail.

BIOLOGICAL STUDY AREA

The BSA is the area in which biological surveys are conducted, with the exception of the delineation of WOTUS, which was conducted within the project boundary (also defined as the area of potential effect [APE]). The botanical surveys and wetland delineation are conducted within the APE as impacts to WOTUS and botanical species will only occur within this area. To account for GGS, the BSA incorporates areas 200 feet from the APE and encompasses 19.7 acres (Figure 3).

PROPOSED BRIDGE STRUCTURE

The proposed new bridge is a single-span, precast, prestressed, voided slab bridge with 32 foot clear width and 40 mile-per-hour design speed. The new bridge will replace the existing structure on the current, existing alignment.

Precast superstructure planks would be formed, cast, and cured off site during foundation construction and then immediately erected upon completion of the abutments. This construction sequence leads to a significant time savings resulting in a shorter construction window, reduced traffic detour duration, and an increased likelihood to complete construction between planting and harvest seasons. This bridge type does not require falsework within the channel, minimizing environmental impacts during construction.



ROADWAY APPROACHES

County Road 66B at the project location is straight and provides access to residences, farm support shops, and rice fields. The existing asphalt approach roadway is approximately 20



Road 66

Colusa Drain

 Biological Study Area - (19.7 acres)
 Project Boundary

USGS 7.5' Quad: Princeton
Land Grant: Larkin Child
UTM Zone 10



1:3,200
0 90 180 Feet

Data Sources: ESRI, NAIP 08/02/2016,
USGS, Glenn County, Quincy Engineering

County of Glenn CR 66B Bridge 11C-0068
Biological Study Area
Figure 3

gallaway
ENTERPRISES

GE: #16-078 Map Date: 08/03/18

feet wide while the clear width of the existing bridge is approximately 18 feet wide. The minimum roadway width for a rural and agricultural development according to local Glenn County Standards is 32 feet clear width, consisting of two (2) 12-foot paved lanes and two 4-foot paved shoulders, and is recommended for this project.

There are currently property access points at three (3) of the four (4) corners of the existing bridge. Approach end treatments off the bridge will need to be designed to ensure these access points are maintained and include minimal take of productive farmland.

It is assumed that CR 66B at the project site will be closed during construction. This will result in an approximate 7-mile detour but will greatly decrease overall impacts, reduce the right-of-way need, and will decrease the total construction time.

IN-CHANNEL WORK AND TEMPORARY ACCESS ROADS

The project may involve a modification or alteration of the streambed with the installation of rock slope protection (RSP) to protect the bridge embankment. Access to the canal will be required to remove the existing bridge supports. Depending on the flows during construction, a temporary stream diversion may be required.

There are currently property access points at three (3) of the four (4) corners of the existing bridge that are used by residents and heavy agricultural equipment. The County has specifically requested that these access openings accommodate entry and exit of a loaded double semi-truck trailer, which is utilized during the harvest season. The access road alignments proposed accommodate truck turns for a double semi-truck trailer, but only with an entry and exit away from the bridge. Providing adequate truck turns toward the bridge would require the access roads to be shifted further into the adjacent properties, therefore requiring the take of productive farmland. The proposed access road alignment limits both environmental and right-of-way impacts.

A quantity estimate of both temporary fill materials required for construction and permanent features within Colusa Drain are presented in **Table 1**.

Table 1. Impacts to Waters of the United States

Type of impact	Cubic yards	Acreage of impact
Fill of other waters	324	0.05
Fill of wetlands	359	0.013
Temporary impacts to wetland features	N/A	0.092

STAGING AREAS, RIGHTS OF WAY, AND UTILITIES

Glenn County currently has a 60-foot right-of-way along the centerline of CR 66B, extending 40 feet to the north and 20 feet to the south of centerline. The area surrounding the bridge is privately owned parcels. It is anticipated that additional right-of-way will be required for temporary construction easements and right-of-way acquisitions.

Because the bridge will likely be closed during construction, contractor staging areas, material storage, and construction operations are expected to primarily occur on or along the existing roadway.

There are no utilities on the existing bridge or around the existing project site. Utility relocation is not anticipated for this project.

CONSTRUCTION EQUIPMENT AND SCHEDULE

The project will be completed in one (1) construction season. Clearing and grubbing will be performed outside of the avian nesting season (February 1 – August 31). Project constraints include agricultural planting season (April 1 – May 31) and agriculture harvest season (September 1 – October 31). The rice fields surrounding the project area require summer flood irrigation from April through late July. In the fall, water is drained from the rice fields into Colusa Drain and harvest is completed. Due to this schedule, and in order to minimize disturbance to local agricultural operations, construction will occur from October 1 – April 30. During this period Colusa Drain is not utilized for irrigation purposes and water levels will be at their lowest, allowing for bridge accessibility.

Equipment anticipated to be used in construction of the replacement bridge includes dozers, cranes, dump trucks, concrete trucks, concrete pumps, and pile driving equipment. Removal of the existing bridge will require excavators, hoe rams, cranes, and dump trucks. A stream diversion within Colusa Drain is anticipated.

2 Study Methods

The biological and botanical surveys were conducted by Gallaway Enterprises after consulting the United States Fish and Wildlife Services (USFWS) Information for Planning and Consultation (IPaC) species list, CDFW Natural Diversity Database (CNDDDB) search, and the California Native Plant Societies (CNPS) list of rare and endangered plants gathered for the BSA (**Appendix A: Species Lists**). Additionally, a map was obtained from the CNDDDB Geographic Information System (GIS) database, which provided general locations of species that had recorded CNDDDB occurrences within a 5-mile radius of the project location (**Figure 4: CNDDDB Occurrences**). Based on the results of the species lists and CNDDDB map, appropriate biological and botanical surveys were conducted.

Regulatory Requirements

The following describes federal, State, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process and to this NES.

Federal

Federal Endangered Species Act

The United States Congress passed the Federal Endangered Species Act (ESA) in 1973 to protect species that are endangered or threatened with extinction. The ESA is intended to operate in conjunction with the NEPA to help protect the ecosystems upon which endangered and threatened species depend. The ESA makes it unlawful to “take” a listed animal without a permit. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” Through regulations, the term “harm” is defined as “an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.”

Migratory Bird Treaty Act

The MBTA (16 USC §703) prohibits the killing of migratory birds or the destruction of their occupied nests and eggs except in accordance with regulations prescribed by the USFWS. Bird species covered by the MBTA includes nearly all of those that breed in North America, excluding introduced (i.e. exotic) species (50 Code of Federal Regulations §10.13). Activities

that involve the removal of vegetation including trees, shrubs, grasses, and forbs or ground disturbance has the potential to affect bird species protected by the MBTA.

Waters of the United States, Clean Water Act, Section 404

The Corps and the U.S. Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into jurisdictional WOTUS, under the Clean Water Act (CWA, §404). The term “waters of the United States” is an encompassing term that includes “wetlands” and “other waters.” Wetlands have been defined for regulatory purposes as follows: “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3, 40 CFR 230.3). Wetlands generally include swamps, marshes, bogs, and similar areas.” Other Waters of the United States are seasonal or perennial water bodies, including lakes, stream channels, drainages, ponds, and other surface water features, that exhibit an ordinary high-water mark (OHWM) but lack positive indicators for one or more of the three wetland parameters (i.e. hydrophytic vegetation, hydric soil, and wetland hydrology) (33 CFR 328.4).

The Corps may issue either individual permits on a case-by-case basis or general permits on a program level. General permits are pre-authorized and are issued to cover similar activities that are expected to cause only minimal adverse environmental effects. Nationwide permits are general permits issued to cover particular fill activities. All nationwide permits have general conditions that must be met for the permits to apply to a particular project, as well as specific conditions that apply to each nationwide permit.

Executive Orders 13112; Prevention and Control of Invasive Species

On February 3, 1999, Executive Order 13112 was signed establishing the National Invasive Species Council. Executive Order 11312 directs all federal agencies to prevent and control introductions of invasive nonnative species in a cost-effective and environmentally sound manner to minimize their economic, ecological, and human health impacts. Executive Order 11312 established a national Invasive Species Council made up of federal agencies and departments and a supporting Invasive Species Advisory Committee composed of state, local, and private entities. The Invasive Species Council and Advisory Committee oversees and facilitates implementation of the Executive Order, including preparation of a National Invasive Species Management Plan.

Section two (2) of the Executive Order states:

- (a) Each Federal agency whose actions may affect the status of invasive species shall, to the extent practicable and permitted by law, (1) identify such actions; (2) subject to the availability of appropriations, and within Administration budgetary limits, use relevant programs and authorities to: (i) prevent the introduction of invasive species; (ii) detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner; (iii) monitor invasive species populations accurately and reliably; (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded; (v) conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species; and (vi) promote public education on invasive species and the means to address them; and (3) not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.
- (b) Federal agencies shall pursue the duties set forth in this section in consultation with the Invasive Species Council, consistent with the Invasive Species Management Plan and in cooperation with stakeholders, as appropriate, and, as approved by the Department of State, when Federal agencies are working with international organizations and foreign nations.

State of California

California Endangered Species Act

The California Endangered Species Act (CESA) is similar to the ESA, but pertains to State-listed endangered and threatened species. The CESA requires State agencies to consult with the CDFW when preparing documents to comply with the CEQA. The purpose is to ensure that the actions of the lead agency do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species. In addition to formal listing under the federal and

State endangered species acts, “Species of Special Concern” receive consideration by CDFW. Species of Special Concern are those whose numbers, reproductive success, or habitat may be threatened.

California Environmental Quality Act Guidelines §15380

Although threatened and endangered species are protected by specific federal and State statutes, CEQA Guidelines §15380(d) provides that a species not listed on the federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled based on the definition in the ESA and the section of the California Fish and Game Code (CFGF) dealing with rare, threatened, and endangered plants and animals. The CEQA Guidelines (§15380) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFW (e.g. candidate species, species of concern) would occur. Thus, CEQA provides an agency with the ability to protect a species from a project’s potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

Clean Water Act, Section 401

The CWA (§401) requires water quality certification and authorization for placement of dredged or fill material in wetlands and other WOTUS. In accordance with the CWA (§401), criteria for allowable discharges into surface waters have been developed by the State Water Resources Control Board, Division of Water Quality. The resulting requirements are used as criteria in granting National Pollutant Discharge Elimination System (NPDES) permits or waivers, which are obtained through the RWQCB per the CWA (§402). Any activity or facility that will discharge waste (such as soils from construction) into surface waters, or from which waste may be discharged, must obtain an NPDES permit or waiver from the RWQCB. The RWQCB evaluates an NPDES permit application to determine whether the proposed discharge is consistent with the adopted water quality objectives of the basin plan.

Streambed Alteration Agreement

The CDFW is a trustee agency that has jurisdiction under the CFGF (§1600 et seq.). The CFGF (§1602), requires that a State or local government agency, public utility, or private entity must notify CDFW if a proposed project will “substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds... except when the

department has been notified pursuant to Section 1601.” If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures.

California Fish and Game Code

The CFGC (§3503.5) states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks, eagles, and falcons) or Strigiformes or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Take includes the disturbance of an active nest resulting in the abandonment or loss of young. The CFGC (§3503) also states that “it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.”

CDFW Incidental Take Permit

Incidental Take Permits (ITP) allow a permittee to take a CESA-listed species if such taking is incidental to, and not the purpose of, carrying out an otherwise lawful activity. These permits are most commonly issued for construction, utility, transportation, and other infrastructure-related projects. Permittees must implement species-specific minimization and avoidance measures, and fully mitigate the impacts of the project. (Fish & G. Code § 2081 (b); Cal. Code Regs., tit. 14, §§ 783.2-783.8)

Central Valley Flood Protection Board Encroachment Permit

Approval by the Central Valley Flood Protection Board (CVFPB) is required for projects or uses which encroach into rivers, waterways, and floodways within and adjacent to federal and State authorized flood control projects and within designated floodways adopted by the CVFPB. You must obtain CVFPB approval before you begin certain uses or construction work, or any proposed project within these areas.

The CVFPB exercises jurisdiction over the levee section, the waterward area between project levees, a minimum 10-foot-wide strip adjacent to the landward levee toe, within 30 feet of the top of the banks of unleveed project channels, and within designated floodways adopted by the CVFPB. Activities outside of these limits which could adversely affect the flood control project are also under CVFPB jurisdiction.

Rare and Endangered Plants

The CNPS maintains a list of plant species native to California with low population numbers, limited distribution, or otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS-ranked plants receive consideration under CEQA review. The CNPS California Rare Plant Rank (CRPR) categorizes plants as the following:

- Rank 1A: Plants presumed extinct in California;
- Rank 1B: Plants rare, threatened, or endangered in California or elsewhere;
- Rank 2: Plants rare, threatened, or endangered in California, but more numerous elsewhere;
- Rank 3: Plants about which we need more information; and
- Rank 4: Plants of limited distribution.

The California Native Plant Protection Act (CFGCA §1900-1913) prohibits the taking, possessing, or sale within the State of any plants with a State designation of rare, threatened, or endangered as defined by CDFW. An exception to this prohibition allows landowners, under specific circumstances, to take listed plant species, provided that the owners first notify CDFW and give the agency at least 10 days to retrieve (and presumably replant) the plants before they are destroyed. Fish and game Code §1913 exempts from the 'take' prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way."

Studies Required

Gallaway Enterprises conducted biological and botanical habitat assessments within the BSA and a protocol-level rare plant survey within the APE. Biological and botanical surveys were conducted following review of the USFWS IPaC report, CNDDDB Rarefind 5 report, CNPS list, and the CNDDDB occurrence map (**Figure 4: CNDDDB Occurrences**). The project boundary or United States Geological Survey (USGS) "Princeton" 7.5 minute quadrangle in which the project is located were used to derive the agency species lists (**Appendix A: Species Lists**). Based on the results of the species lists, Gallaway Enterprises conducted a general habitat assessment and protocol-level rare plant botanical survey to identify any rare, endangered, threatened, or sensitive species and their habitats that may have the potential to occur within the BSA.

Personnel and Survey Dates

Gallaway Enterprises visited the site on May 31 and July 10, 2018. During the visits, biologist Brittany Reaves conducted a general biological habitat assessment, and senior botanist and certified arborist Elena Gregg conducted a protocol-level rare plant survey for plants with blooming periods that overlapped the survey dates, and a general botanical habitat assessment for plants with blooming periods outside the survey dates.

Mrs. Gregg has over 15 years of professional experience conducting rare plant surveys, wetland delineations, and habitat assessments in California. She has a working knowledge of CNPS, CDFW, and USFWS survey protocols and holds a CDFW collection permit for listed plant species. Through her extensive field experience in a wide array of habitats and eco-regions in Northern California, Mrs. Gregg has gained knowledge of locally invasive plants species and noxious weeds.

Mrs. Reaves has over 3 years of experience surveying at the protocol and general level for listed reptiles and amphibians and other special-status wildlife species. Mrs. Reaves has experience surveying for federally listed species such as California red-legged frog (*Rana draytonii*), assisting in dewatering activities including fish relocation, surveying for nesting birds and raptors, and conducting habitat assessments for listed species. Mrs. Reaves has also installed bird and bat exclusion at a variety of bridge replacement projects.

BIOLOGICAL HABITAT ASSESSMENT

The biological evaluation was conducted on July 10, 2018 by walking the entire BSA, where accessible, and identifying specific habitat types and elements. If habitat was observed for special-status species it was then evaluated for quality based on vegetation composition and structure, physical features (e.g. water, soils), microclimate, surrounding area, presence of predatory species and available resources (e.g. prey items, nesting substrates). The undersides of the bridges were also closely inspected for signs of nesting or roosting by birds and bats. Biological and botanical species observed within the BSA are listed in **Appendix B**.

BOTANICAL SURVEY

A protocol-level botanical survey was conducted on May 31, 2018 to determine the potential for special-status plant species to occur within the BSA. The survey was conducted in accordance with the standardized guidelines issued by the regulatory agencies (USFWS 1996, CDFW 2018) and the CNPS (2001). The survey was conducted by walking in all

accessible areas of the APE and noting the habitat elements present (e.g. soils, geology, hydrology, topography, aspect, elevation, etc.) and vegetation communities present. If present, natural and man-made disturbance patches were noted as well as the successional stage of vegetation. All observed plants were identified to genus (**Appendix B**).

Agency Coordination and Professional Contacts

A field meeting with Caltrans biologist Brooks Taylor, Cole Grube and Matt Vader of Glenn County, Rick Sowers and Nick Anderson of Crawford & Associates, Han Bin Lang of WRECO, Jim Foster, Jason Jurrens, Scott McCauley, Krassimir Panayotov, and Jim Thornton, of Quincy Engineering, and Jody Gallaway of Gallaway Enterprises, was held at the project site on September 22, 2016 to discuss construction methodology and techniques to avoid effects to special-status resources.

Limitations That May Influence Results

The protocol-level botanical survey was conducted on May 31, during the blooming period (BP) for most plants. Vernal pool smallscale (*Atriplex persistens*) and Hoover's spurge (*Euphorbia hooveri*) have BPs that fall outside of the date of the protocol-level survey; however, these plants require vernal pool habitat that does not occur within the BSA. There were no other limitations that may influence results of the habitat assessments.

3 Results: Environmental Setting

Description of the Existing Biological and Physical Conditions

The study area lies within the northern Central Valley of California. The BSA is surrounded by agricultural land, with an irrigation drainage system (Colusa Drain) running through the project boundary from north to south. Two (2) unnamed, ephemeral drainages run horizontally through the BSA along CR 66B, each hydrologically connected to Colusa Drain. The agricultural land surrounding the project site consists solely of rice fields.

Study Area

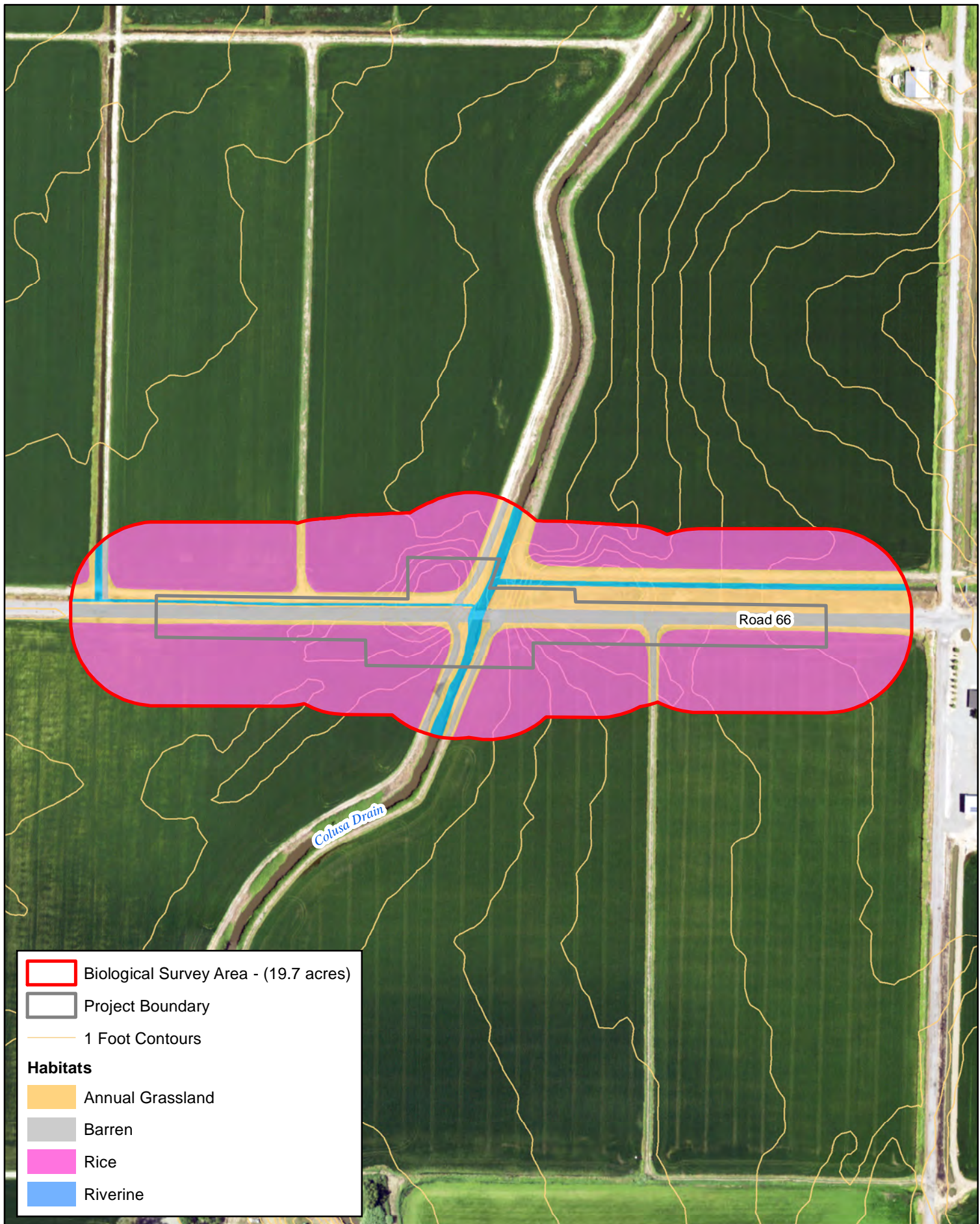
Within the BSA, an approximately 54-foot-long existing bridge occurs over Colusa Drain. Colusa Drain flows north to south through the BSA. During the spring and summer, flows within Colusa Drain consist of agricultural irrigation water. Low flows are anticipated from mid-September to through March after the rice has been harvested and the primary hydrologic input is rainwater. Vegetation communities and soils within the BSA are heavily influenced by agricultural farming practices, particularly irrigational flooding for rice farming. All construction related activities will be restricted to the limits of the APE.

Physical Conditions

The BSA is topographically flat and experiences regular disturbance due to existing farming conditions. The BSA sits at an elevation of approximately 73.8 feet above sea level and is sloped between 0-1 percent. There are two (2) soil map units within the BSA that are recognized by the USDA NRCS. The soil types found within the BSA are predominately silty clays or clay loams (NRCS 2016). The average annual precipitation is 17.95 inches and the average annual temperature is 61.5° F in the region where the survey area is located. (Western Regional Climate Center 2018). Vegetation within the BSA and Colusa Drain is managed; however, Himalayan blackberry (*Rubus armeniacus*) and willow (*Salix* sp.) thickets are present on the banks of Colusa Drain. Colusa Drain features a mud substrate, with fairly steep banks. Colusa Drain is bordered by unpaved access roads featuring small mammal burrows, and irrigated rice fields are adjacent. The two unnamed drainages present could be described as roadside ditches, with shallower banks and ephemeral flows.

Biological Conditions in the Biological Study Area

The BSA consists of annual grassland, riverine, rice, and barren habitat types (**Figure 5: Habitat Map**). Habitat types within the BSA are described below based on Mayer and Laudenslayer's *A Guide to Wildlife Habitats of California* (1988).



1:3,500

0 100 200 Feet

Data Sources: ESRI, NAIP 07/11/2016,
USGS, Glenn County, Quincy Engineering

County of Glenn CR 66B Bridge 11C-0068
Habitat Map
Figure 5

gallaway
ENTERPRISES

GE: #16-078 Map Date: 08/08/18

RIVERINE

Riverine habitat is characterized by intermittent or continually running water. Colusa Drain and the unnamed ephemeral drainages provide riverine habitat within the BSA. Unlike most riverine habitats, the water flow within Colusa Drain is influenced and controlled by local agricultural irrigation, precluding many aquatic and fish species that may normally be present within riverine habitat. Water flows within Colusa Drain are high in the spring and summer during rice-growing season and low in the fall and winter when fields are drained and irrigation ceases. Dominant vegetation within this habitat type consists primarily of floating water primrose (*Ludwigia peploides*), Himalayan blackberry, and willow. Himalayan blackberry and willow provide suitable nesting substrate for some avian species.

RICE

Rice habitat consists of flood irrigated crops that are seed-producing annual grasses. This habitat type is dominated by rice species (*Oryza* spp.) grown in leveed fields that are flooded much of the growing period, and dried out to mature and to facilitate harvesting. As these fields are intentionally flooded for much of the growing season, they are considered wetlands. Emergent rice, vegetated checks, and shallow, warm water provide shelter and habitat for aquatic species and small mammals that in turn provide ample prey for larger animals. Many species of wildlife and especially waterfowl, shorebirds, and wading birds have adapted to rice.

BARREN

Barren habitat is typified by less than two (2) percent vegetative cover. Within the BSA, CR 66B, the existing bridge, and the unpaved access roads are classified as barren. While barren habitat generally does not provide high quality habitat to wildlife, the unpaved access roads feature many small mammal burrows. Bridges can be used for cover and breeding activities by birds and bats. Unvegetated roadside areas can sometimes be used by ground-nesting birds, such as killdeer (*Charadrius vociferous*).

ANNUAL GRASSLAND

Annual grassland occurs in patches within the upland habitat within the BSA. Annual grasslands occur on open flat to gently rolling lands and are dominated by grasses and annual plants, with the dominant species varying depending on the climate and soils. This habitat type often occurs on its own or as an understory in wooded habitat types. Some of the dominant plant species observed in the annual grassland habitat within the BSA include black mustard (*Brassica nigra*), rip-gut brome (*Bromus diandrus*), yellow star thistle (*Centaurea solstitialis*), and soft chess (*Bromus hordeaceus*). In some areas within the BSA,

Himalayan blackberry grows from within riverine habitat, up onto banks into the annual grassland habitat. A variety of ground nesting avian species, reptiles, and small mammals use grassland habitat for breeding, while many other wildlife species only use it for foraging or require other habitat characteristics such as rocky outcroppings, cliffs, caves, or ponds in order to find shelter and cover for escapement (Mayer and Laudenslayer 1988). Common species found utilizing this habitat type include western fence lizards (*Sceloporus occidentalis*), common garter snakes (*Thamnophis elegans*), California ground squirrels (*Otospermophilus beecheyi*), jackrabbits (*Lepus californicus*), and a variety of avian species.

Regional Species and Habitats and Natural Communities of Concern

The following special-status species were identified under the USFWS IPaC, CNDDDB, and the CNPS species lists (**Appendix A: Species Lists**) as having potential to occur within the USGS Princeton 7.5 minute and surrounding quadrangles. Species that have the potential to occur within the BSA are based on suitable habitat within the BSA, CNDDDB occurrences within a 5-mile radius of the BSA, and observations made during biological and botanical surveys. A summary of special-status species and their potential to occur within the BSA is provided in **Table 2**.

Table 2. Listed and Candidate Species Potentially Occurring or Known to Occur in the County of Glenn CR 66B Bridge Replacement Project BSA.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent	Potential to Occur/Rationale
SENSITIVE NATURAL COMMUNITIES					
Coastal and Valley Freshwater Marsh	N/A	SNC	Freshwater marshes dominated by rush (<i>Juncus spp.</i>), cattails (<i>Typha spp.</i>), and <i>Scirpus spp.</i>	A	<u>None</u> . Coast and Valley Freshwater Marsh does not occur within the BSA.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent	Potential to Occur/Rationale
SENSITIVE NATURAL COMMUNITIES					
Great Valley Cottonwood Riparian Forest	N/A	SNC	Dense, broad-leafed, winter deciduous riparian forest dominated by Fremont cottonwood (<i>Populus fremontii</i> ssp. <i>fremontii</i>) and Goodding's black willow (<i>Salix gooddingii</i>).	A	<u>None</u> . Great Valley Cottonwood Riparian Forest does not occur within the BSA.
Great Valley Mixed Riparian Forest	N/A	SNC	Large corridors of riparian forest dominated by valley oaks (<i>Quercus lobata</i>).	A	<u>None</u> . Great Valley Mixed Riparian Forest does not occur within the BSA.
Great Valley Willow Scrub	N/A	SNC	Riparian scrub dominated by willow (<i>Salix</i> spp.).	A	<u>None</u> . Great Valley Willow Scrub does not occur within the BSA.
PLANTS					
Heartscale	<i>Atriplex cordulata</i> var. <i>cordulata</i>	CNPS 1B.2	Saline or alkaline soils, chenopod scrub, meadows and seeps, valley and foothill grassland (sandy). (BP: Apr-Oct)	A	<u>None</u> . Species was not observed during protocol-level survey.
Brittlescale	<i>Atriplex depressa</i>	CNPS 1B.2	Usually in alkali scalds or alkaline clay in meadows or annual grassland; rarely associated with riparian, marshes, or vernal pools. (BP: Apr-Oct)	A	<u>None</u> . Species was not observed during protocol-level survey.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent	Potential to Occur/Rationale
PLANTS					
Vernal pool smallscale	<i>Atriplex persistens</i>	CNPS 1B.2	Alkaline vernal pools. (BP: June, Aug-Oct)	A	<u>None</u> . There are no vernal pools within or adjacent to the BSA.
Palmate-bracted bird's-beak	<i>Chloropyron palmatum</i>	FE/SE/CNPS 1B.1	Chenopod scrub, valley/foothill grassland in alkaline soils. (BP: May - Oct)	A	<u>None</u> . No chenopod scrub habitat within the BSA and not observed during protocol-level survey. No effect.
Hoover's spurge	<i>Euphorbia hooveri</i>	FT/CNPS 1B.2	Vernal pools. (BP: Jul - Oct)	A	<u>None</u> . There are no vernal pools within or adjacent to the BSA. No effect.
Heckard's pepper-grass	<i>Lepidium latipes</i> var. <i>heckardii</i>	CNPS 1B.2	Valley and foothill grassland (alkaline flats). (BP: Mar-May)	A	<u>None</u> . Not observed during protocol-level surveys.
Colusa grass	<i>Neostapfia colusana</i>	FT/SE/CNPS 1B.1	Vernal pools (adobe, large). (BP: May-Aug)	A	<u>None</u> . There are no vernal pools within or adjacent to the BSA and the only nearby CNDDDB occurrence (#13) has been determined to be extirpated. Not observed during protocol-level surveys. No effect.
Hairy Orcutt grass	<i>Orcuttia pilosa</i>	FE/SE/CNPS 1B.1	Vernal pools. (BP: May-Sep)	A	<u>None</u> . There are no vernal pools within or adjacent to the BSA. Not observed during protocol-level surveys. No effect.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent	Potential to Occur/Rationale
PLANTS					
California alkali grass	<i>Puccinellia simplex</i>	CNPS 1B.2	Alkaline, vernally mesic; sinks, flats, and lake margins. (BP: Mar-May)	A	<u>None</u> . Not observed during protocol-level surveys.
INVERTEBRATES					
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	FE	Moderately turbid, deep, cool-water vernal pool.	A	<u>None</u> . There are no vernal pools within or adjacent to the BSA, and no CNDDDB occurrences within 5 miles. No effect.
Crotch bumble bee	<i>Bombus crotchii</i>	SC	Native grasslands and shrublands featuring Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	A	<u>None</u> . The land within the BSA does not contain suitable foraging or overwintering habitat due to the highly disturbed agricultural nature of the site and none of the typical associate plant species are present.
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	FT	Moderately turbid, deep, cool-water vernal pool.	A	<u>None</u> . There are no vernal pools within or adjacent to the BSA. No effect.
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	FE	Moderately turbid, deep, cool-water vernal pool.	A	<u>None</u> . There are no vernal pools within or adjacent to the BSA. No effect.
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	FT	Blue elderberry shrubs in riparian zones.	A	<u>None</u> . There are no elderberry shrubs within the BSA. No effect.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent	Potential to Occur/Rationale
FISH					
Delta smelt	<i>Hypomesus transpacificus</i>	FT/SE	Endemic to the San Francisco Bay and Sacramento–San Joaquin Delta Estuary. Found only from the San Pablo Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo Counties.	A	<u>None</u> . Delta smelt are not known to occur in Glenn County; therefore, the project will have no effect on Delta smelt (50 CFR Part 27, April 7, 2010).
Steelhead Central Valley DPS	<i>Oncorhynchus mykiss irideus</i>	FT	Sacramento and San Joaquin Rivers and their tributaries.	A	<u>None</u> . Colusa Drain is an agricultural irrigation canal that is not known to support anadromous fish species. There are known barriers between Colusa Drain and the Sacramento River. No effect.
Chinook salmon Central Valley spring-run ESU	<i>Oncorhynchus tshawytscha</i>	FT/ST	Sacramento River and its tributaries.	A	<u>None</u> . Colusa Drain is an agricultural irrigation canal that is not known to support anadromous fish species. There are known barriers between Colusa Drain and the Sacramento River. No effect.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent	Potential to Occur/Rationale
FISH					
Chinook salmon Sacramento River winter-run ESU	<i>Oncorhynchus tshawytscha</i>	FE/SE	Sacramento River and its tributaries.	A	<u>None</u> . Colusa Drain is an agricultural irrigation canal that is not known to support anadromous fish species. There are known barriers between Colusa Drain and the Sacramento River. No effect.
Green sturgeon southern DPS	<i>Acipenser medirostris</i>	FT/SSC	Sacramento River and its tributaries.	A	<u>None</u> . Colusa Drain is an agricultural irrigation canal that is not known to support anadromous fish species. There are known barriers between Colusa Drain and the Sacramento River. No effect.
MAMMALS					
Western red bat	<i>Lasiurus blossevillei</i>	SSC	Solitary species; roosts in trees often in riparian forests and occasionally oak woodlands.	A	<u>None</u> . There are no suitable roosting trees present within the BSA.
Pallid bat	<i>Antrozous pallidus</i>	SSC	Colonial species; roosts during the day in buildings, small crevices, bridges, and occasionally under exfoliating bark, hollow trees, and bole cavities. Common in open dry environments.	A	<u>None</u> . There is no suitable day roosting habitat present on the bridge. No signs of bats using the bridge as a day or night roost were observed.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent	Potential to Occur/Rationale
REPTILES & AMPHIBIANS					
Western pond turtle	<i>Emys marmorata</i>	SSC	Artificial ponds, pond margins, backwaters of rivers, and sloughs vegetated by heavy riparian and/or emergent vegetation and basking areas.	HP	<u>Moderate</u> . There is suitable aquatic habitat present within the BSA. Basking and nesting habitat is limited, as the banks of Colusa Drain are fairly steep and there are no emergent logs or rocks present. There are no CNDDDB occurrences within 5 miles of the BSA.
California red-legged frog	<i>Rana draytonii</i>	FT/SSC	Inhabits quiet pools of streams, marshes, and occasionally ponds.	A	<u>None</u> . California red-legged frogs have been extirpated from the Central Valley since 1960 (USFWS 2002). No effect.
Giant garter snake	<i>Thamnophis gigas</i>	FT/ST	Agricultural wetlands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes ponds, sloughs, small lakes, and their associated uplands. (sea level - 400 feet elevation)	HP	<u>High</u> . There is suitable aquatic and upland habitat for GGS present and CNDDDB occurrences within 5 miles the BSA. May affect, and is likely to adversely affect.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent	Potential to Occur/Rationale
BIRDS					
Tricolored blackbird	<i>Agelaius tricolor</i>	ST	Fresh emergent wetlands, blackberry brambles, agricultural fields and grasslands.	HP	High. The blackberry and willow thickets provide nesting habitat and adjacent rice fields provide foraging habitat within the BSA. There are multiple nearby CNDDDB occurrences, and tricolored blackbirds were observed within 500 feet of the BSA during the biological habitat assessment.
Swainson's Hawk	<i>Buteo swainsoni</i>	ST	Open grasslands, shrublands and agricultural fields, often near riparian forests.	A	None. There is no suitable nesting habitat and marginal foraging habitat present in the BSA. No effect.
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	FT/SE	Open woodlands, riparian areas, orchards and moist, overgrown thickets.	A	None. There is no suitable nesting habitat within or adjacent the BSA. Nearby CNDDDB occurrences are limited to the vicinity of the Sacramento River. No effect.
Bank swallow	<i>Riparia riparia</i>	ST	Along water ways with sharply cut banks made up of brittle soils.	A	None. There are no sharply cut banks suitable for bank swallow nesting colonies within the BSA.

Common Name	Scientific Name	Status	General Habitat Description	Habitat Present/Absent	Potential to Occur/Rationale
BIRDS					
Northern spotted owl	<i>Strix occidentalis caurina</i>	FT/ST	Inhabits older coniferous forest stands.	A	<u>None</u> . There is no suitable habitat present within or adjacent the BSA. No effect.
Code Designations					
Absent [A] - no habitat present and no further work needed. Habitat Present [HP] -habitat is, or may be present. The species may be present. Present [P] - the species is present. Critical Habitat [CH] - project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present. Status: Federal Endangered (FE); Federal Threatened (FT); Federal Candidate (FC), Federal Species of Concern (FSC); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Rare (SR); State Candidate (SC), State Species of Special Concern (SSC); California Native Plant Society (CNPS); Sensitive Natural Community (SNC)					

4 Results: Biological Resources, Discussion of Impacts and Mitigation

Habitats and Natural Communities of Special Concern

There are no CDFW-designated natural communities of special concern within or adjacent to the BSA.

There are six (6) features that qualify as potentially jurisdictional WOTUS within the BSA, including four (4) agricultural wetlands and three (3) drainages including Colusa Drain. Project activities will result in temporary impacts to 0.092 acres of wetland features. Project activities will result in permanent impacts to 0.013 acres of agricultural wetlands and 0.05 acres of other waters. A Draft Delineation of WOTUS Map is included as **Appendix C**.

Special-Status Plant Species

Based on the results of the habitat assessment and protocol-level rare plant survey conducted, the BSA was determined to not contain any special-status plant species or suitable habitat for special-status plant species (**Table 2**).

Special-Status Animal Species Occurrences

GIANT GARTER SNAKE

Giant garter snakes are listed as threatened under the ESA and CESA. According to the USFWS Recovery Plan for the Giant Garter Snake, the project site is within the Colusa Basin Recovery Unit (USFWS 2017). Giant garter snakes are the largest species of garter snake. Dull yellow striping and a wide head commonly distinguishes GGS from other common species of garter snake. Giant garter snakes are found in the wetlands of the Sacramento and San Joaquin Valleys from Chico, Butte County to Mendota Wildlife Area, Fresno County. Suitable habitat includes marshes, sloughs, back waters of rivers, irrigation canals, drainage canals, agricultural wetlands, flooded rice fields, and occasionally streams with low gradient and slow to stagnant waters. Giant garter snakes breed from March to April and females give birth to live young from July to early September. Giant garter snakes stay active as long as temperatures are warm, and start to move underground into small mammal burrows or crevices around October 1 to avoid potentially lethal autumn and winter temperatures (USFWS 2017). Giant garter snakes overwinter in upland hibernacula. Current threats facing

the GGS are habitat loss and fragmentation as a result of urbanization and conversion of wetlands, changes in water availability, levee and canal maintenance, water management and water deliveries that do not account for the giant garter snake, small populations, and invasive aquatic species (USFWS 2017).

Survey Results

Suitable habitat components or primary constituent elements (PCE) for GGS consist of (1) a fresh-water aquatic component with protective emergent vegetative cover that will allow foraging, (2) an upland component near the aquatic habitat that can be used for thermoregulation and for summer shelter in burrows, and (3) an upland refugia component that will serve as winter hibernacula (USFWS 2017). There is suitable aquatic and upland habitat that contains the PCEs for GGS within and surrounding the BSA. In addition, there are two (2) GGS CNDDDB occurrences within 5 miles of the BSA.

Aquatic Habitat

Suitable aquatic habitat for GGS consists of marshes, ponds, small lakes, low gradient streams, irrigation ditches, drainage canals, and agricultural wetlands (e.g. rice fields) (USFWS 2017). The BSA contains suitable aquatic habitat for GGS in the form of Colusa Drain, the unnamed drainage ditch, and surrounding rice paddies. Water is present in these areas during the GGS's active season (Gallaway Enterprises personal observation) and vegetation was observed along the edges and banks of the Colusa Drain for foraging and refuging GGS.

Upland Habitat

Suitable upland habitat for GGS consists of land that is not typically inundated during the active season and is adjacent to suitable aquatic habitat. Suitable upland habitat often contains bankside vegetative cover and small mammal burrows or other forms of refuge (USFWS 2017). The BSA contains suitable upland habitat for GGS. There is vegetative cover on the banks of Colusa Drain, and there are many small mammal burrows are present within the unpaved access roads and annual grassland areas directly adjacent to aquatic habitat.

Project Impacts

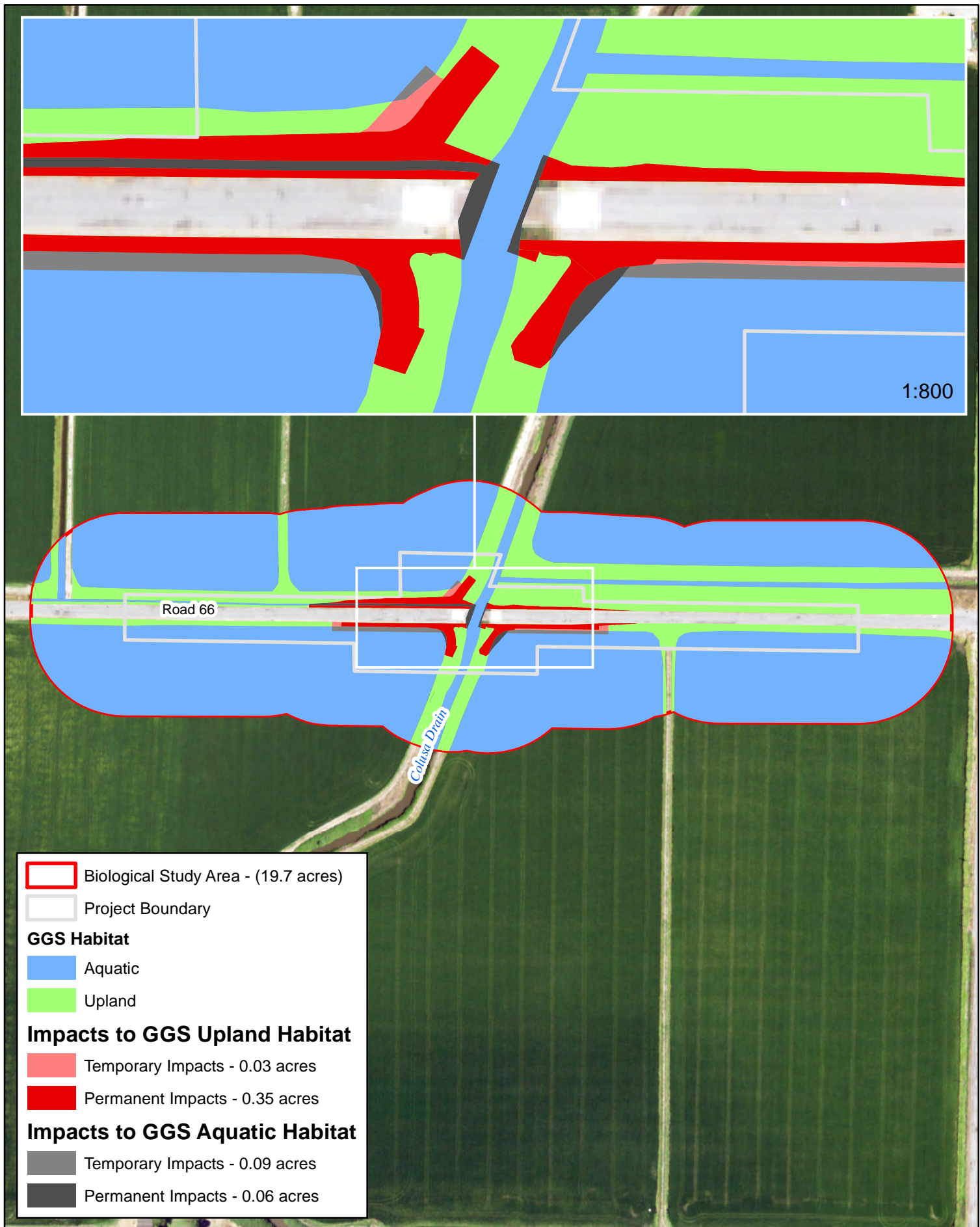
Construction activities resulting in temporary and permanent impacts to GGS aquatic and upland habitat will occur and are depicted in **Figure 6**. The project may affect, and is likely to adversely affect GGS.

Initial construction and the installation of exclusion fencing will be initiated during the active period of GGS; therefore, GGS individuals are expected to avoid harm's way during initial vegetation removal and ground-disturbing activities. Construction activities will continue as temperatures decrease and GGS enter their dormant season. With the installation of exclusion fencing during the GGS active season and the continuation of construction activities throughout the GGS inactive season, GGS individuals will not be expected to move into the project area. Avoidance and minimization measures will also be implemented to minimize the potential for take. To ensure no direct take of GGS occur due to the proposed project, the following avoidance and minimization measures will be implemented.

Avoidance and Minimization Efforts

The following recommendations, when implemented, will avoid and minimize impacts to this species:

- The applicant is proposing to work outside of the snake's active season. Construction and ground disturbing activities will be initiated during the active season, continue through the inactive season, and is anticipated to be completed before the inactive season is over.
- Twenty-four hours prior to the commencement of construction activities, the project area shall be surveyed for giant garter snakes by a qualified biologist. The biologist will provide a written report that adequately documents the monitoring efforts within 24 hours of commencement of construction activities. The project area shall be re-inspected by the monitoring biologist whenever a lapse in construction activity of 2 weeks or greater has occurred.
- A Worker Environmental Awareness Training Program for construction personnel shall be conducted by a qualified biologist for all construction workers, including contractors, prior to the commencement of construction activities.



- During construction operations, stockpiling of construction materials, portable equipment, vehicles, and supplies will be restricted to the designated construction staging areas and all operations will be confined to the minimal area necessary.
- A qualified biologist shall be onsite to monitor for GGS during all vegetation removal and initial ground-disturbing activities. After the initial ground-disturbing activities have been completed, the qualified biologist will monitor the installation of exclusion fencing around the project boundary. The qualified biologist will monitor excavation of suitable GGS habitat and bridge removal.
- Project-related vehicles will observe a 20-mile-per-hour speed limit within construction areas, except on existing paved roads where they will adhere to the posted speed limits.
- High visibility fencing will be erected around the habitats of the snake to identify and protect these areas from encroachment of personnel and equipment. These areas will be avoided by all construction personnel. The fencing shall be inspected by the Contractor before the start of each work day and maintained by the Contractor until completion of the project. Fencing will be established in the uplands immediately adjacent to aquatic snake habitat and extending up to 200 feet from construction activities, where feasible. Snake exclusionary fencing will be buried at least 6 inches below the ground to prevent snakes from attempting to burrow or move under the fence.
- Best Management Practices (BMPs) will be implemented to minimize the potential for erosion and sedimentation into nearby waterbodies.
- After completion of construction activities, the applicant will remove any temporary fill and construction debris and, wherever feasible, restore disturbed areas to pre-project conditions. Restoration work includes such activities as re-vegetating the banks and active channels with a seed mix similar to pre-project conditions.
- A photo documentation report showing pre- and post-project area conditions will be submitted 1 month after the implementation of the restoration.

Compensatory Mitigation

The project will permanently and temporarily impact upland and aquatic GGS habitat. To mitigate permanent and temporary impacts to GGS habitat the following is recommended:

- Permanent loss of GGS habitat will be compensated by purchasing creation credits at the Colusa Basin Conservation Bank or at another USFWS and CDFW approved conservation bank with a service area that accommodates the project location. Credits shall be purchased prior to the start of construction. **Table 3** shows the amount of credits that will need to be purchased.
- Temporary disturbance to snake habitat shall be restored to pre-project conditions within 1 year of completion of construction.
 - Restoration and monitoring shall follow the USFWS *Guidelines for Restoration and/or Replacement of Giant Garter Snake Habitat* (1997). If restoration is unsuccessful, as determined by the USFWS, consultation will be reinitiated.

Table 3. GGS Permanent and Temporary Impacts to Upland and Aquatic Habitat and Total Acres to be Mitigated or Required Action.

Impacted Habitat	Acres	Mitigation Ratio	Required Action	Acres to be Mitigated
Upland Permanent	0.35	3:1	Purchase Credits at an Approved USFWS GGS Mitigation Bank	1.05
Upland Temporary	0.03	1:1	Restore	0.03
Aquatic Permanent	0.06	3:1	Purchase Credits at an Approved USFWS GGS Mitigation Bank	0.18
Aquatic Temporary	0.09	1:1	Restore	0.09
Total Mitigation Acres				1.35

Cumulative Effects

There are no current or planned projects that will have cumulative effects on GGS or GGS habitat within the project BSA.

WESTERN POND TURTLE

The western pond turtle is a SSC in California. Western pond turtles are drab, darkish-colored turtles with a yellowish to cream colored head. They range from the Washington Puget Sound to the California Sacramento Valley. Suitable aquatic habitats include slow moving to stagnant water, such as back waters and ponded areas of rivers and creeks, semi-permanent to permanent ponds and irrigation ditches. Preferred habitats include features such as hydrophytic vegetation, for foraging and cover, and basking areas to regulate body temperature. In early spring through early summer, female turtles begin to move over land in search for nesting sites. Eggs are laid on the banks of slow moving streams. The female digs a hole approximately four inches deep and lays up to eleven eggs. Afterwards the eggs are covered with sediment and are left to incubate under the warm soils. Eggs are typically laid between March and August (Zeiner et al. 1990). Current threats facing the western pond turtle include loss of suitable aquatic habitats due to rapid changes in water regimes and removal of hydrophytic vegetation.

Survey Results

Suitable western pond turtle habitat occurs within Colusa Drain and the unnamed drainages present in the BSA, when water is present. Colusa Drain generally lacks emergent rocks and logs on which western pond turtles bask for thermoregulation; however, the ditches features fresh emergent vegetation for foraging and cover and open banks for basking. Western pond turtles are frequently found within irrigation canals and drainages throughout their range in the Central Valley.

Project Impacts

Impacts to western pond turtles will be avoided with the implementation of avoidance and minimization measures and by conducting a survey immediately prior to in-stream work; however, if turtles are discovered within the project boundary they may need to be relocated by a qualified biologist, which may lead to impacts.

Avoidance and Minimization Efforts

The following are avoidance and minimization measures recommended in order to avoid and minimize potential impacts to western pond turtle:

- Immediately prior to conducting in-stream work, a qualified biologist shall conduct a survey to determine the presence or absence of western pond turtles. If western pond turtles are observed where they could be potentially impacted by project

activities, as determined by the onsite biologist, then work shall not be conducted within 100 feet of the sighting until the turtle(s) have left the project site or a qualified biologist has relocated the turtle(s) immediately outside of the project site.

- If turtle eggs are uncovered during construction activities, then all work shall stop within a 25 foot radius of the nest and the onsite biologist should be notified immediately. The 25 foot buffer should be marked with identifiable markers that do not consist of fencing or materials that may block the migration of young turtles to the water or attract predators to the nest site. No work will be allowed within the 25 foot buffer until CDFW has been consulted.
- All portions of the project site that could result in inadvertently trapping turtles, such as open pits, trenches, and de-watered areas will be covered and/or exclusion fencing will be installed to prevent turtles from entering these areas.

Compensatory Mitigation

No compensatory mitigation will be required since the implementation of the avoidance and minimization measures discussed above will ensure that no take of western pond turtle will occur.

Cumulative Effects

There are no current or planned projects that will have cumulative effects on western pond turtles that occur within the project BSA.

TRICOLORED BLACKBIRD

Tricolored blackbirds are listed as threatened under the CESA. They range from southern Oregon through the Central Valley, and coastal regions of California into the northern part of Mexico. Tricolored blackbirds are medium-size birds with black plumage and distinctive red marginal coverts, bordered by whitish feathers. Tricolored blackbirds nest in large colonies within agricultural fields, marshes with thick herbaceous vegetation, or in clusters of large blackberry bushes near a source of water and suitable foraging habitat. They are nomadic migrators, so documenting occurrence at any location does not mean that they will necessarily return to that area. Current threats facing tricolored blackbirds include colonial breeding in regards to small population size, habitat loss, overexploitation, predation, contaminants, extreme weather events, and drought, water availability, and climate change (CDFW 2018).

Survey Results

There is suitable nesting habitat for tricolored blackbirds within the BSA where dense patches of blackberry brambles occur, and the surrounding rice fields provide suitable foraging habitat. Further, there are ten (10) tricolored blackbird CNDDDB occurrences within 5 miles of the BSA (CNDDDB 2018). Tricolored blackbirds were observed within 500 feet of the BSA during the biological habitat assessment performed by Gallaway Enterprises.

Project Impacts

Construction activities will be initiated outside of the avian nesting season, on October 1, and will be continuous until the project is completed in late April. With the implementation of avoidance and minimization measures, there will be no direct or indirect impacts to tricolored blackbird.

Avoidance and Minimization Efforts

There is suitable nesting habitat present within the BSA in the form of blackberry thickets. The following are recommended avoidance and minimization measures for tricolored blackbird:

- Project activities, including site grubbing and vegetation removal, within the BSA shall be initiated outside of the bird nesting season (February 1 – August 31).
- If project activities cannot be initiated outside of the bird nesting season, or if there is a lapse in construction of more than 7 days during the bird nesting season, then the following will occur:
 - A qualified biologist will conduct a pre-construction survey within 7 days prior to starting work.
 - If an active tricolored blackbird nest (i.e. with egg(s) or young) is observed within 250 feet of the project boundary during the pre-construction survey, then a species protection buffer will be established. The species protection buffer will be defined by the qualified biologist in consultation with CDFW. Construction activity shall be prohibited within the buffer zones until the young have fledged or the nest fails. Nests shall be monitored once per week by a qualified biologist and a report submitted to the County weekly.

Compensatory Mitigation

No compensatory mitigation will be required since the implementation of the avoidance and minimization measures discussed above will ensure that no impacts to or take of tricolored blackbird will occur.

Cumulative Effects

There are no current or planned projects that will have cumulative effects on tricolored blackbirds that occur within the project BSA.

MIGRATORY BIRDS

Nesting birds are protected under the MBTA (16 USC 703) and the CFGC (3503). The MBTA (16 USC §703) prohibits the killing of migratory birds or the destruction of their occupied nests and eggs except in accordance with regulations prescribed by the USFWS. The bird species covered by the MBTA includes nearly all of those that breed in North America, excluding introduced (i.e. exotic) species (50 Code of Federal Regulations §10.13). Activities that involve the removal of vegetation including trees, shrubs, grasses, and forbs or ground disturbance has the potential to affect bird species protected by the MBTA.

The CFGC (§3503.5) states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks, eagles, and falcons) or Strigiformes (all owls except barn owls) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto”. Take includes the disturbance of an active nest resulting in the abandonment or loss of young. The CFGC (§3503) also states that “it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto”.

Survey Results

The habitats present within the BSA provide nesting habitat for a variety of migratory bird and raptor species. During the field survey, no old bird nests were found under the bridge; however, it is possible for cliff swallows, barn swallows, and black phoebes, which commonly nest on the sides or pillars of bridges, to occupy the area.

Project Impacts

Construction activities will be initiated outside of the avian nesting season. With the implementation of avoidance and minimization measures, there will be no impacts to migratory birds or raptors.

Avoidance and Minimization Efforts

To avoid impacts to avian threatened species (i.e. tricolored blackbird) or avian species protected under the MBTA and the CFGC, the following avoidance and minimization measures are recommended.

The following are avoidance and minimization measures for California avian threatened species and species protected under the MBTA and the CFGC:

- Any vegetation removal and/or ground disturbance activities should take place during the avian non-breeding season (September 1 – January 31).
- If project activities cannot be initiated outside of the avian nesting season, or if there is a lapse in construction of more than 7 days during the avian nesting season, then a migratory bird and raptor survey shall be conducted within the BSA by a qualified biologist. The qualified biologist shall:
 - Conduct a survey for all birds protected by the MBTA and CFGC within 7 days prior to construction activities, and map all nests located within 200 feet of construction areas;
 - Develop buffer zones around active nests as recommended by a qualified biologist. Construction activity shall be prohibited within the buffer zones until the young have fledged or the nest fails. Nests shall be monitored at least once per week by a qualified biologist and a report submitted to the County monthly.
- All staging and construction activity will be limited to designated areas within the BSA and designated routes for construction equipment shall be established in order to limit disturbance to the surrounding area.

The following are recommended exclusion and monitoring activities to avoid and minimize impacts to avian species protected under the MBTA and CFGC that have the potential to nest on the existing bridge:

- The removal of the current bridge will be conducted during the avian non-breeding season (September 1 – January 31) so as to avoid impacts to avian species that may potentially nest on the bridge.

- If the current bridge cannot be removed outside of the avian breeding season (February 1 – August 31) then the following exclusion and monitoring activities shall take place.

Exclusion

- All avian nests should be removed from the bridge prior to February 1 so as to deter avian species from nesting on the bridge.
- Any exclusionary devices that are deemed necessary in order to prevent avian species from nesting on the existing bridge should be established by a qualified biologist prior to February 1. Exclusionary devices shall be maintained by the County or a qualified biologist until the current bridge is removed or the end of the avian breeding season.

Monitoring

- Weekly, or as necessary, monitoring or additional exclusion activities will be conducted by a qualified biologist on the current bridge after February 1 until the current bridge is removed or the end of the avian breeding season (August 31).

Project Impacts

With the implementation of avoidance and minimization measures specified above there will be no direct or indirect impacts to avian threatened species (i.e. tricolored blackbird) or avian species protected under the MBTA and CFGC.

Compensatory Mitigation

There will be no compensatory mitigation necessary for project activities in regards to avian threatened species (i.e. tricolored blackbird) or avian species protected under the MBTA and CFGC.

Cumulative Effects

There are no foreseeable new actions that have potential to threaten migratory birds within the BSA or contribute to cumulative effects of migratory bird species.

5 Results: Permits and Technical Studies for Special Laws or Conditions

Federal Endangered Species Act Consultation Summary

The USFWS was contacted in July of 2018 for a list of endangered, threatened, sensitive, and rare species, and their habitats within the project's BSA. The NMFS was also contacted to obtain a list of endangered and threatened fish species and critical habitat.

The proposed project has been determined to have no effect on northern spotted owl, western yellow-billed cuckoo, valley elderberry longhorn beetle, conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, California red-legged frog, delta smelt, Central Valley steelhead, Chinook salmon Central Valley spring-run ESU, Chinook salmon Sacramento River winter-run ESU, green sturgeon southern DPS, palmate-bracted bird's-beak, Hoover's spurge, hairy Orcutt grass, or Colusa grass; however, the project may affect and is likely to adversely affect GGS.

As a result of impacts to federally listed species due to the proposed project, Caltrans will initiate formal consultation with the USFWS for impacts to GGS and to obtain concurrence that there will be no impacts to the federally listed species listed above.

California Endangered Species Act Consultation Summary

The CDFW was contacted in July of 2018 for a list of endangered, threatened, sensitive, and rare species and their habitats within the project's BSA. The list was later referenced to determine appropriate biological and botanical surveys and potential species occurrence within the project BSA. The County will obtain an Incidental Take Permit or consistency determination authorizing activities that may impact GGS habitat or have the potential to take GGS.

Wetlands and Other Waters Coordination Summary

Gallaway Enterprises conducted a delineation of WOTUS within the BSA.

The project site was surveyed on-foot by Gallaway Enterprises staff on May 31, 2018 to identify potentially jurisdictional features. The surveys involved an examination of botanical resources, soils, hydrological features, and determination of wetland characteristics based

on the United States Army Corps of Engineers Wetlands Delineation Manual (1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (2008). The boundaries of non-tidal, non-wetland waters, when present, were delineated at the OHWM as defined in 33 Code of Federal Regulations (CFR) 328.3 and further described in the U.S. Army Corps of Engineers *Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (2008). The OHWM represents the limit of Corps jurisdiction over non-tidal waters (e.g., streams and ponds) in the absence of adjacent wetlands (33 CFR 328.04) (Curtis et al. 2011).

As there are potentially jurisdictional other waters that will be impacted by project activities, a CDFW §1602 Streambed Alteration Agreement, RWQCB §401 Water Quality Certification permit and a Corps Nationwide §404 3(a) permit are necessary. The project will result in 0.003 acre of temporary and 0.05 acre (433.2 linear feet) of permanent impacts to other waters, and 0.089 acres of temporary and 0.063 acres of permanent impacts to agricultural wetland features. Mitigation for impacts to jurisdictional WOTUS will be addressed through the purchase of credits at a Corps approved mitigation bank or payment to a Corps approved in-lieu fund.

Invasive Species

Many non-native plant species occur in California's natural lands. Some of these non-natives have become naturalized and are relatively benign; however, there are a number of these non-natives that are considered highly invasive. The non-native plants that are considered invasive are tracked and ranked by their invasiveness by the USDA NRCS and the Cal-IPC. Within the BSA, twelve (12) invasive plant species were observed that are included on the USDA and/or Cal-IPC invasive and noxious weed plant list as having a moderate or higher degree of invasiveness in California (**Table 4**). It is recommended that general best management practices (BMP) be implemented prior and during construction activities as recommended under the Cal-IPC Preventing the Spread of Invasive Plants: Best Management Practices for Transportation and Utility Corridors (2012). The following are the recommended general BMP's under Cal-IPC.

- Schedule activities to minimize potential for introduction and spread of invasive plants.
- Designate specific areas for cleaning tools, vehicles, equipment, clothing and gear.

- Designate waste disposal areas for invasive plant materials, and contain invasive plant material during transport.
- Plan travel routes to avoid areas infested with invasive plants.
- Clean tools, equipment, and vehicles before transporting materials and before entering and leaving worksites.
- Clean clothing, footwear and gear before leaving infested areas.
- Prepare worksites to limit the introduction and spread of invasive plants.
- Minimize soil and vegetation disturbance.

Table 4. Invasive Plant Species Identified within the BSA.

Scientific Name	Common Name	Ecology	CAL-IPC	USDA California State
<i>Avena barbata</i>	Wild Oats	Winter annual grass that grows in every grassland area in California. It does well in sandy/poor soils, often on the roadsides. It is one of the annual grasses that was introduced as a forage species and has replaced the native perennial grasses.	Moderate	N/A
<i>Brassica nigra</i>	Black mustard	Winter annual herb that grows allelopathic chemicals that prevent germination of native plants. The spread of this species can increase frequency of fires in chaparral and coastal sage scrub, changing these habitats to annual grassland.	Moderate	N/A

Scientific Name	Common Name	Ecology	CAL-IPC	USDA California State
<i>Bromus diandrus</i>	Ripgut brome	Annual grass that has displaced much of the native grass throughout California. It becomes very dry and flammable during the dry season, increasing wildfire frequency, leading to conversion of shrubland and woodland to grassland. This species is reported to hybridize with downy and red brome.	Moderate	N/A
<i>Centaurea solstitialis</i>	Yellow star-thistle	Winter annual invading 12 million acres in California. This species inhabits open hills, grasslands, open woodlands, fields, roadsides, and rangelands. It is considered one of the most serious rangeland weeds as it propagates rapidly by seed, and one large plant can produce 75,000 seeds.	High	CW
<i>Cynodon dactylon</i>	Bermuda grass	Creeping perennial grass commonly used in garden plantings as turf species. Readily escapes to natural lands, particularly in riparian and wet areas.	Moderate	CW

Scientific Name	Common Name	Ecology	CAL-IPC	USDA California State
<i>Festuca perennis</i>	Italian ryegrass	Annual grass found throughout California except in desert ecosystems. It prefers areas with fertile, well-drained soils, including roadsides, fields, orchards and vineyards. It is commonly cultivated for erosion control, pasture forage, and turf.	Moderate	N/A
<i>Foeniculum vulgare</i>	Sweet fennel	A hardy, perennial herb with yellow flowers and feathery leaves. Typically inhabits waste places, roadsides, and other disturbed areas.	Moderate	N/A
<i>Hordeum murinum</i>	Wall hare barely	An annual grass that is not native to California. Inhabits mostly disturbed sites. Very frequently encountered in Valley and foothill grasslands. Hare barley may have arrived in California with Spanish settlers and is more common than Mediterranean barley in disturbed, dry upland areas.	Moderate	N/A

Scientific Name	Common Name	Ecology	CAL-IPC	USDA California State
<i>Ludwigia peploides</i>	Floating water primrose	A perennial aquatic plant that forms very dense, virtually impenetrable mats which restrict fishing and boat access. It outcompetes native aquatic plants. Can be found throughout California in rice fields, ditches, ponds, slow moving streams, and along edges of lakes and reservoirs.	High	N/A
<i>Myriophyllum aquaticum</i>	Parrot's feather	A stout aquatic perennial that forms dense mats of intertwined brownish stems in water. It forms dense mats that can entirely cover the surface of the water in shallow lakes and other waterways.	High	N/A
<i>Rubus armeniacus</i>	Himalayan blackberry	Sprawling, evergreen shrub found throughout much of northern California. Often associated with moist areas and riparian areas.	High	N/A
<i>Torilis arvensis</i>	Hedge-parsley	Occurs in disturbed habitats throughout California. The mature fruit has small hooks that cling to clothing, hair, or fur, facilitating long distance dispersal.	Moderate	N/A

CODE DESIGNATIONS

Moderate – Ecological impacts are substantial, but not severe; moderate to high rates of dispersal but establishment dependent on ecological disturbance; limited to widespread distribution.

High – Ecological impacts severe; moderate to high rates of dispersal and establishment; widely distributed.

CW = C List (noxious weeds)

6 References

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Appendix A – Species Lists

United States Fish and Wildlife Service, IPaC

California Department of Fish and Game Natural Diversity Database

California Native Plant Society

National Marine Fisheries Service



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713



In Reply Refer To:

November 03, 2020

Consultation Code: 08ESMF00-2018-SLI-2514

Event Code: 08ESMF00-2021-E-00731

Project Name: County of Glenn CR 66B Bridge Replacement

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

Project Summary

Consultation Code: 08ESMF00-2018-SLI-2514

Event Code: 08ESMF00-2021-E-00731

Project Name: County of Glenn CR 66B Bridge Replacement

Project Type: BRIDGE CONSTRUCTION / MAINTENANCE

Project Description: bridge replacement

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/39.42861482902849N122.04977768476522W>



Counties: Glenn, CA

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2891 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850 Habitat assessment guidelines: https://ecos.fws.gov/ipac/guideline/assessment/population/436/office/11420.pdf	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Colusa Grass <i>Neostapfia colusana</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5690	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Kevin Sevier

From: Brittany Reaves
Sent: Tuesday, November 03, 2020 10:25 AM
To: 'nmfswcrca.specieslist@noaa.gov'
Subject: County Road 66B Bridge 11C-0068 Federal Aid Project No. BRLO-5911(063)

County Road 66B Bridge 11C-0068 Federal Aid Project No. BRLO-5911(063)

Quad Name **Princeton**

Quad Number **39122-D1**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) - **X**
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) - **X**

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat - **X**
SRWR Chinook Salmon Critical Habitat - **X**
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat - **X**

ESA Marine Invertebrates

Range Black Abalone (E) -

Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -

Olive Ridley Sea Turtle (T/E) -

Leatherback Sea Turtle (E) -

North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -

Fin Whale (E) -

Humpback Whale (E) -

Southern Resident Killer Whale (E) -

North Pacific Right Whale (E) -

Sei Whale (E) -

Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -

Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -

Chinook Salmon EFH -



Groundfish EFH -

Coastal Pelagics EFH -

Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

**See list at left and consult the NMFS Long Beach office
562-980-4000**

MMPA Cetaceans -

MMPA Pinnipeds -

Brittany Reaves

Biologist

Gallaway Enterprises

(530) 332-9909



Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Willows (3912252) OR Glenn (3912251) OR Llano Seco (3912158) OR Logandale (3912242) OR Princeton (3912241) OR Butte City (3912148) OR Maxwell (3912232) OR Moulton Weir (3912231) OR Sanborn Slough (3912138)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
American badger <i>Taxidea taxus</i>	AMAJF04010	None	None	G5	S3	SSC
Baker's navarretia <i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	PDPLM0C0E1	None	None	G4T2	S2	1B.1
bald eagle <i>Haliaeetus leucocephalus</i>	ABNKC10010	Delisted	Endangered	G5	S3	FP
bank swallow <i>Riparia riparia</i>	ABPAU08010	None	Threatened	G5	S2	
bent-flowered fiddleneck <i>Amsinckia lunaris</i>	PDBOR01070	None	None	G3	S3	1B.2
black-crowned night heron <i>Nycticorax nycticorax</i>	ABNGA11010	None	None	G5	S4	
Brazilian watermeal <i>Wolffia brasiliensis</i>	PMLEM03020	None	None	G5	S2	2B.3
brittlescale <i>Atriplex depressa</i>	PDCHE042L0	None	None	G2	S2	1B.2
burrowing owl <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S3	SSC
cackling (=Aleutian Canada) goose <i>Branta hutchinsii leucopareia</i>	ABNJB05035	Delisted	None	G5T3	S3	WL
California alkali grass <i>Puccinellia simplex</i>	PMPOA53110	None	None	G3	S2	1B.2
California black rail <i>Laterallus jamaicensis coturniculus</i>	ABNME03041	None	Threatened	G3G4T1	S1	FP
California linderiella <i>Linderiella occidentalis</i>	ICBRA06010	None	None	G2G3	S2S3	
caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	PDBRA2R010	None	None	G1	S1	1B.1
Coastal and Valley Freshwater Marsh <i>Coastal and Valley Freshwater Marsh</i>	CTT52410CA	None	None	G3	S2.1	
Colusa grass <i>Neostaphia colusana</i>	PMPOA4C010	Threatened	Endangered	G1	S1	1B.1
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	ICBRA03010	Endangered	None	G2	S2	
Crotch bumble bee <i>Bombus crotchii</i>	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
Ferris' milk-vetch <i>Astragalus tener</i> var. <i>ferrisiae</i>	PDFAB0F8R3	None	None	G2T1	S1	1B.1



Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
giant gartersnake <i>Thamnophis gigas</i>	ARADB36150	Threatened	Threatened	G2	S2	
great blue heron <i>Ardea herodias</i>	ABNGA04010	None	None	G5	S4	
great egret <i>Ardea alba</i>	ABNGA04040	None	None	G5	S4	
Great Valley Cottonwood Riparian Forest <i>Great Valley Cottonwood Riparian Forest</i>	CTT61410CA	None	None	G2	S2.1	
Great Valley Mixed Riparian Forest <i>Great Valley Mixed Riparian Forest</i>	CTT61420CA	None	None	G2	S2.2	
Great Valley Valley Oak Riparian Forest <i>Great Valley Valley Oak Riparian Forest</i>	CTT61430CA	None	None	G1	S1.1	
Great Valley Willow Scrub <i>Great Valley Willow Scrub</i>	CTT63410CA	None	None	G3	S3.2	
Greene's tuctoria <i>Tuctoria greenei</i>	PMPOA6N010	Endangered	Rare	G1	S1	1B.1
hairy Orcutt grass <i>Orcuttia pilosa</i>	PMPOA4G040	Endangered	Endangered	G1	S1	1B.1
heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>	PDCHE040B0	None	None	G3T2	S2	1B.2
Heckard's pepper-grass <i>Lepidium latipes</i> var. <i>heckardii</i>	PDBRA1M0K1	None	None	G4T1	S1	1B.2
hoary bat <i>Lasiurus cinereus</i>	AMACC05030	None	None	G5	S4	
Hoover's spurge <i>Euphorbia hooveri</i>	PDEUP0D150	Threatened	None	G1	S1	1B.2
North American porcupine <i>Erethizon dorsatum</i>	AMAFJ01010	None	None	G5	S3	
northern harrier <i>Circus hudsonius</i>	ABNKC11011	None	None	G5	S3	SSC
osprey <i>Pandion haliaetus</i>	ABNKC01010	None	None	G5	S4	WL
palmate-bracted bird's-beak <i>Chloropyron palmatum</i>	PDSCR0J0J0	Endangered	Endangered	G1	S1	1B.1
Peruvian dodder <i>Cuscuta obtusiflora</i> var. <i>glandulosa</i>	PDCUS01111	None	None	G5T4?	SH	2B.2
San Joaquin spearscale <i>Extriplex joaquinana</i>	PDCHE041F3	None	None	G2	S2	1B.2
silver-haired bat <i>Lasionycteris noctivagans</i>	AMACC02010	None	None	G5	S3S4	
snowy egret <i>Egretta thula</i>	ABNGA06030	None	None	G5	S4	



Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
song sparrow ("Modesto" population) <i>Melospiza melodia</i>	ABPBXA3010	None	None	G5	S3?	SSC
steelhead - Central Valley DPS <i>Oncorhynchus mykiss irideus pop. 11</i>	AFCHA0209K	Threatened	None	G5T2Q	S2	
Swainson's hawk <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S3	
tricolored blackbird <i>Agelaius tricolor</i>	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	IICOL48011	Threatened	None	G3T2	S3	
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	ICBRA03030	Threatened	None	G3	S3	
vernal pool smallscale <i>Atriplex persistens</i>	PDCHE042P0	None	None	G2	S2	1B.2
vernal pool tadpole shrimp <i>Lepidurus packardii</i>	ICBRA10010	Endangered	None	G4	S3S4	
water star-grass <i>Heteranthera dubia</i>	PMPON03010	None	None	G5	S2	2B.2
watershield <i>Brasenia schreberi</i>	PDCAB01010	None	None	G5	S3	2B.3
western pond turtle <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
western red bat <i>Lasiurus blossevillei</i>	AMACC05060	None	None	G5	S3	SSC
western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
white-faced ibis <i>Plegadis chihi</i>	ABNGE02020	None	None	G5	S3S4	WL
woolly rose-mallow <i>Hibiscus lasiocarpus var. occidentalis</i>	PDMAL0H0R3	None	None	G5T3	S3	1B.2

Record Count: 55

*The database used to provide updates to the Online Inventory is under construction. [View updates and changes made since May 2019 here.](#)

Plant List

23 matches found. [Click on scientific name for details](#)

Search Criteria

Found in Quads 3912252, 3912251, 3912158, 3912242, 3912241, 3912148, 3912232 3912231 and 3912138;

[Modify Search Criteria](#) [Export to Excel](#) [Modify Columns](#) [Modify Sort](#) [Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	1B.2	S3	G3
Astragalus tener var. ferrisiae	Ferris' milk-vetch	Fabaceae	annual herb	Apr-May	1B.1	S1	G2T1
Atriplex cordulata var. cordulata	heartscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G3T2
Atriplex depressa	brittlescale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
Atriplex persistens	vernal pool smallscale	Chenopodiaceae	annual herb	Jun, Aug, Sep, Oct	1B.2	S2	G2
Azolla microphylla	Mexican mosquito fern	Azollaceae	annual / perennial herb	Aug	4.2	S4	G5
Brasenia schreberi	watershield	Cabombaceae	perennial rhizomatous herb (aquatic)	Jun-Sep	2B.3	S3	G5
Centromadia parryi ssp. rudis	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	4.2	S3	G3T3
Chloropyron palmatum	palmate-bracted bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	May-Oct	1B.1	S1	G1
Cuscuta obtusiflora var. glandulosa	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	Jul-Oct	2B.2	SH	G5T4?
Euphorbia hooveri	Hoover's spurge	Euphorbiaceae	annual herb	Jul-Sep(Oct)	1B.2	S1	G1
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
Heteranthera dubia	water star-grass	Pontederiaceae	perennial herb (aquatic)	Jul-Oct	2B.2	S2	G5
Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	1B.2	S3	G5T3
Lepidium latipes var. heckardii	Heckard's pepper-grass	Brassicaceae	annual herb	Mar-May	1B.2	S1	G4T1
Myosurus minimus ssp. apus	little mousetail	Ranunculaceae	annual herb	Mar-Jun	3.1	S2	G5T2Q

<u>Navarretia leucocephala ssp. bakeri</u>	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G4T2
<u>Neostapfia colusana</u>	Colusa grass	Poaceae	annual herb	May-Aug	1B.1	S1	G1
<u>Orcuttia pilosa</u>	hairy Orcutt grass	Poaceae	annual herb	May-Sep	1B.1	S1	G1
<u>Puccinellia simplex</u>	California alkali grass	Poaceae	annual herb	Mar-May	1B.2	S2	G3
<u>Tropidocarpum capparideum</u>	caper-fruited tropidocarpum	Brassicaceae	annual herb	Mar-Apr	1B.1	S1	G1
<u>Tuctoria greenei</u>	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	1B.1	S1	G1
<u>Wolffia brasiliensis</u>	Brazilian watermeal	Araceae	perennial herb (aquatic)	Apr,Dec	2B.3	S2	G5

Suggested Citation

California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 03 November 2020].

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Questions and Comments

rareplants@cnps.org

Appendix B – Species Observed during the 2018 Site Visits

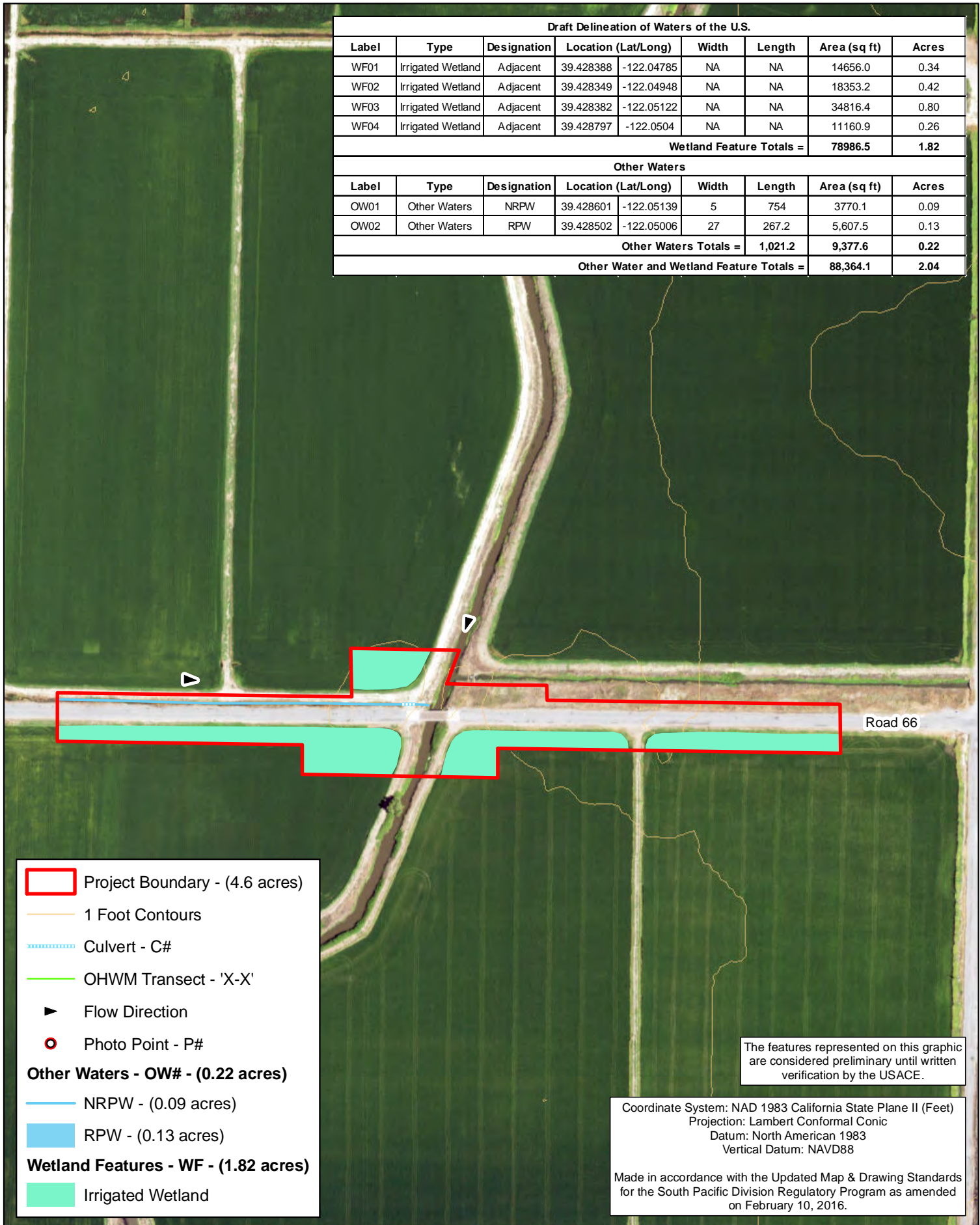
Plant Species Observed within the CR 66B Bridge Replacement Project May, 31 2018	
Scientific Name	Common Name
<i>Artemisia douglasiana</i>	California mugwort
<i>Avena barbata</i>	Wild oats
<i>Brassica nigra</i>	Black mustard
<i>Bromus diandrus</i>	Rip-gut brome
<i>Bromus hordeaceus</i>	Soft chess
<i>Centaurea solstitialis</i>	Yellow star thistle
<i>Convolvulus arvensis</i>	Bindweed
<i>Cynodon dactylon</i>	Bermuda grass
<i>Cyperus eragrostis</i>	Tall nutsedge
<i>Cyperus strigosus</i>	False nutsedge
<i>Erigeron bonariensis</i>	South American horseweed
<i>Erodium botrys</i>	Long-beaked stork's-bill
<i>Erodium cicutarium</i>	Cut-leaf filaree
<i>Euphorbia maculata</i>	Spotted spurge
<i>Festuca perennis</i>	Rye-grass
<i>Foeniculum vulgare</i>	Sweet fennel
<i>Hordeum murinum</i>	Wall hare barley
<i>Lemna sp.</i>	Duckweed
<i>Ludwigia peploides</i>	Marsh purslane
<i>Malvella leprosa</i>	Alkali mallow
<i>Marrubium vulgare</i>	Horehound
<i>Myriophyllum aquaticum</i>	Parrot's feather
<i>Oryza sp.</i>	Rice
<i>Panicum capillare</i>	Witchgrass
<i>Persicaria sp.</i>	Smartweed
<i>Phalaris paradoxa</i>	Hood canarygrass
<i>Polygonum aviculare</i>	Prostrate knotweed
<i>Polypogon monspeliensis</i>	Rabbitsfoot grass
<i>Pseudognaphalium luteoalbum</i>	Weedy cudweed
<i>Rubus armeniacus</i>	Himalayan blackberry
<i>Rumex crispus</i>	Curly dock
<i>Silybum marianum</i>	Milk thistle
<i>Sonchus asper</i>	Sow thistle
<i>Sorghum halepense</i>	Johnsongrass
<i>Torilis arvensis</i>	Hedge parsley
<i>Trifolium sp.</i>	Clover
<i>Verbena sp.</i>	Vervain
<i>Veronica anagallis-aquatica</i>	Water speedwell

Animal Species Observed within the CR 66B Bridge Replacement Project July 10, 2018	
Scientific Name	Common Name
<i>Aix sponsa</i>	Wood duck

Scientific Name	Common Name
<i>Corvus brachyrhynchos</i>	American crow
<i>Sayornis nigricans</i>	Black phoebe

Appendix C – Draft Delineation of Waters of the US Map

Draft Delineation of Waters of the U.S.								
Label	Type	Designation	Location (Lat/Long)		Width	Length	Area (sq ft)	Acres
WF01	Irrigated Wetland	Adjacent	39.428388	-122.04785	NA	NA	14656.0	0.34
WF02	Irrigated Wetland	Adjacent	39.428349	-122.04948	NA	NA	18353.2	0.42
WF03	Irrigated Wetland	Adjacent	39.428382	-122.05122	NA	NA	34816.4	0.80
WF04	Irrigated Wetland	Adjacent	39.428797	-122.0504	NA	NA	11160.9	0.26
Wetland Feature Totals =							78986.5	1.82
Other Waters								
Label	Type	Designation	Location (Lat/Long)		Width	Length	Area (sq ft)	Acres
OW01	Other Waters	NRPW	39.428601	-122.05139	5	754	3770.1	0.09
OW02	Other Waters	RPW	39.428502	-122.05006	27	267.2	5,607.5	0.13
Other Waters Totals =						1,021.2	9,377.6	0.22
Other Water and Wetland Feature Totals =							88,364.1	2.04



1:3,000 1 inch = 250 feet

0 100 200 Feet

Data Sources: ESRI, NAIP 07/11/2016,
USGS, Glenn County, Quincy Engineering

County of Glenn CR 66B Bridge 11C-0068 Draft Delineation of Waters of the U.S.

Delineation By: E. Gregg
Map By: V. Birdseye

gallaway
ENTERPRISES

GE: #16-078 Map Date: 06/27/18

Appendix D – Project Location Photos

**Glenn County CR 66B Project Site Photos
Taken May 31 and July 10, 2018**



Bridge over Colusa Drain at CR 66B, looking west. 7/10/18



Colusa Drain viewed from the bridge, looking south. 7/10/18



Colusa Drain viewed from the bridge, looking north. 7/10/18



Unpaved access road on southwest side of the project site, looking south. 7/10/18



Drainage ditch along CR 66B, looking west. 5/31/18



Bridge structure viewed from the side, looking west. 5/31/18