Appendix C

Natural Environment Study

County Road 96 over Dry Slough Bridge Replacement Project

Natural Environment Study

Yolo County, California

Sections 2 and 3
Township 8N, Range 1E

Merritt Quadrangle

District 3-YOL-CR 96
Federal Project No. BRLO-5922 (104)

February 2021

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

Natural Environment Study

STATE OF CALIFORNIA
Department of Transportation
District 3-YOL-CR 96

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Table of Contents

List of Figures Tables and Appendices

List of Abbreviated Terms

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
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
Corps	United States Army Corps of Engineers
County	Yolo County
CRPR	California Rare Plant Rank
CWA	Clean Water Act
DPS	Distinct Population Segment
EFH	Essential Fish Habitat
EPA	Environmental Protection Agency
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
GIS	Geographic Information System
HCP	Habitat Conservation Plan
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Quality Act
NES	Natural Environmental Study
NOAA	National Oceanic and Atmospheric Administration

NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
OHWM	Ordinary High Water Mark
RWQCB	Regional Water Quality Control Board
SSC	State Species of Special Concern
SWRCB	State Water Resources Control Board
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States

Summary

Yolo County proposes to replace the existing bridge on County Road 96 crossing over Dry Slough with funding made available through the Federal Highway Administration Highway Bridge Program and administered by the California Department of Transportation. The bridge was determined to be functionally obsolete by California Department of Transportation as recently as 2013 and currently has a sufficiency rating of 53.6.

The project site is located within the southern region of Yolo County, between Interstate 505 and State Route 113. County Road 96 is a rural local roadway that extends between Russell Boulevard to the south and County Road 27 to the north. The purpose of the project is to improve public safety while traveling on the County road. Construction of this project is anticipated to begin Spring of 2023 and to be completed within a single construction season.

The proposed project will construct a new bridge along the same roadway alignment. The new bridge is anticipated to be a single-span structure, approximately 60 to 70 feet long. Construction of the bridge will involve excavation for and construction of concrete abutments, founded on driven piles. The new abutments will be constructed behind the existing abutments and most of this work will occur outside of the waterway. Construction of the roadway approaches will involve the removal of existing pavement and placement of new roadway fill material, aggregate base, hot mix asphalt pavement, and installation of guard rail. Tree removal and removal of other vegetation along the slough will be necessary for the project. Temporary work within Dry Slough includes removal of the existing structure, falsework erection and removal, and installation of scour countermeasures at the abutments. Temporary slough diversion is anticipated in order to complete activities within the waterway. Relocation of overhead electrical and communication lines, including four utility poles, along the west side of County Road 96 is anticipated as part of the project.

Gallaway Enterprises conducted assessments in compliance with the Yolo County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP). The assessments included a Land Cover Mapping and Covered Species Habitat Assessment and a Planning Level Survey for Land Cover Types and Covered Species Habitat. The purpose of the assessments was to determine the presence of special-status species, quantify land cover types, and define impacts within the Biological Study Area (BSA). The BSA for the project includes the roadway and bridge structure, County right-of-way, areas of proposed right-of-way acquisition along County Road 96, and a 10-foot buffer from the areas of direct impact (Fee Buffer) as required by the Yolo HCP/NCCP. Land cover types designated by the Yolo

County HCP/NCCP as Sensitive Natural Communities occur within the BSA: Riverine and Valley Foothill Riparian. Other Yolo HCP/NCCP land cover types that occur within the BSA are: Barren, Cultivated Lands, Developed, and Semiagricultural.

There is no suitable habitat for special-status plant species within the BSA. There is suitable habitat within the BSA for western pond turtle, Swainson's hawk, white-tailed kite, and tricolored blackbird, which are covered species under the Yolo County HCP/NCCP. There is modeled habitat for western pond turtle, Swainson's hawk, white-tailed kite, western yellow-billed cuckoo, and tricolored blackbird within the BSA. Modeled habitat represents land areas for which the Yolo County HCP/NCCP expects to provide habitat for covered species based on modeled habitat parameters (e.g., land cover type, distance from aquatic areas, topography, species occurrences). There is also a potential for occurrence within the BSA for northern harrier, pallid bat, and nesting migratory birds and raptors protected under the Migratory Bird Treaty Act and California Fish and Game Code.

Consistent with the Yolo County HCP/NCCP, planning level surveys were conducted for the federally listed western yellow-billed cuckoo due to the presence of modeled habitat; however, suitable nesting habitat was not identified within the BSA.

There will be no impacts to western pond turtle, Swainson's hawk, white-tailed kite, tricolored blackbird, northern harrier, pallid bat, or nesting migratory birds and raptors with the implementation of avoidance and minimization measures in accordance with the Yolo County HCP/NCCP.

There will be minor permanent impacts to Dry Slough, an "other water" tributary (0.023 acres). There will be no impacts to wetlands as currently defined under the federal Clean Water Act. Mitigation for impacts to jurisdictional waters of the United States will be addressed through the purchase of credits at a Corps approved mitigation bank or payment to a Corps approved in-lieu fund.

Chapter 1 – Introduction

The purpose of the County Road (CR) 96 Over Dry Slough Bridge Replacement Project (project) is to improve public safety by replacing the current bridge on CR 96 over Dry Slough which was determined to be functionally obsolete in 2013. The project is located in unincorporated Yolo County, California (**Figure 1: Regional Location Map, Figure 2: Project Location Map**).

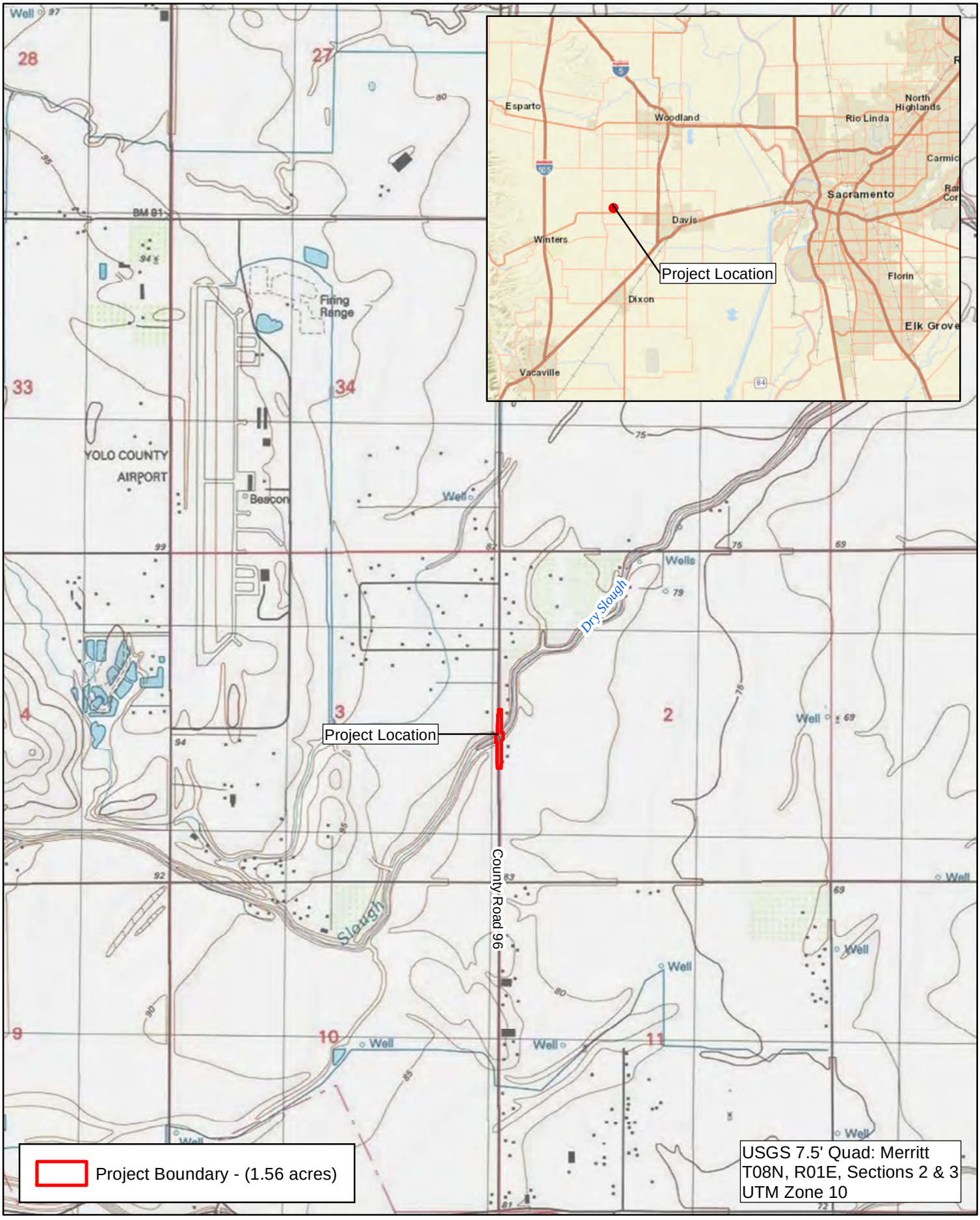
The purpose of this Natural Environment Study (NES) is to evaluate potential project impacts to special-status species and their habitats within the project vicinity. In addition, this NES complies with the Yolo Habitat Conservation Plan/Natural Community Conservation Plan (Yolo HCP/NCCP) survey and reporting requirements.

Project History and Description

Yolo County (County) proposes to replace the existing bridge on CR 96 over Dry Slough with funding made available through the Federal Highway Administration (FHWA) Highway Bridge Program and administered by the California Department of Transportation (Caltrans). The bridge was determined to be functionally obsolete by Caltrans as recently as 2013 and currently has a sufficiency rating of 53.6.

The project site is located within the southern region of Yolo County, east of the Yolo County Airport. County Road 96 is a rural local roadway that extends between Russell Boulevard to the south and CR 27 to the north. County Road 96 is paved and has an approximate width of 20 feet. The bridge, with an Average Daily Traffic count of 216 vehicles, is bordered by agricultural and residential parcels. There is a residential structure approximately 100 feet northwest of the bridge and an agricultural building approximately 60 feet southeast of the bridge. The posted speed limit along CR 96 within the project vicinity is 45 mph.

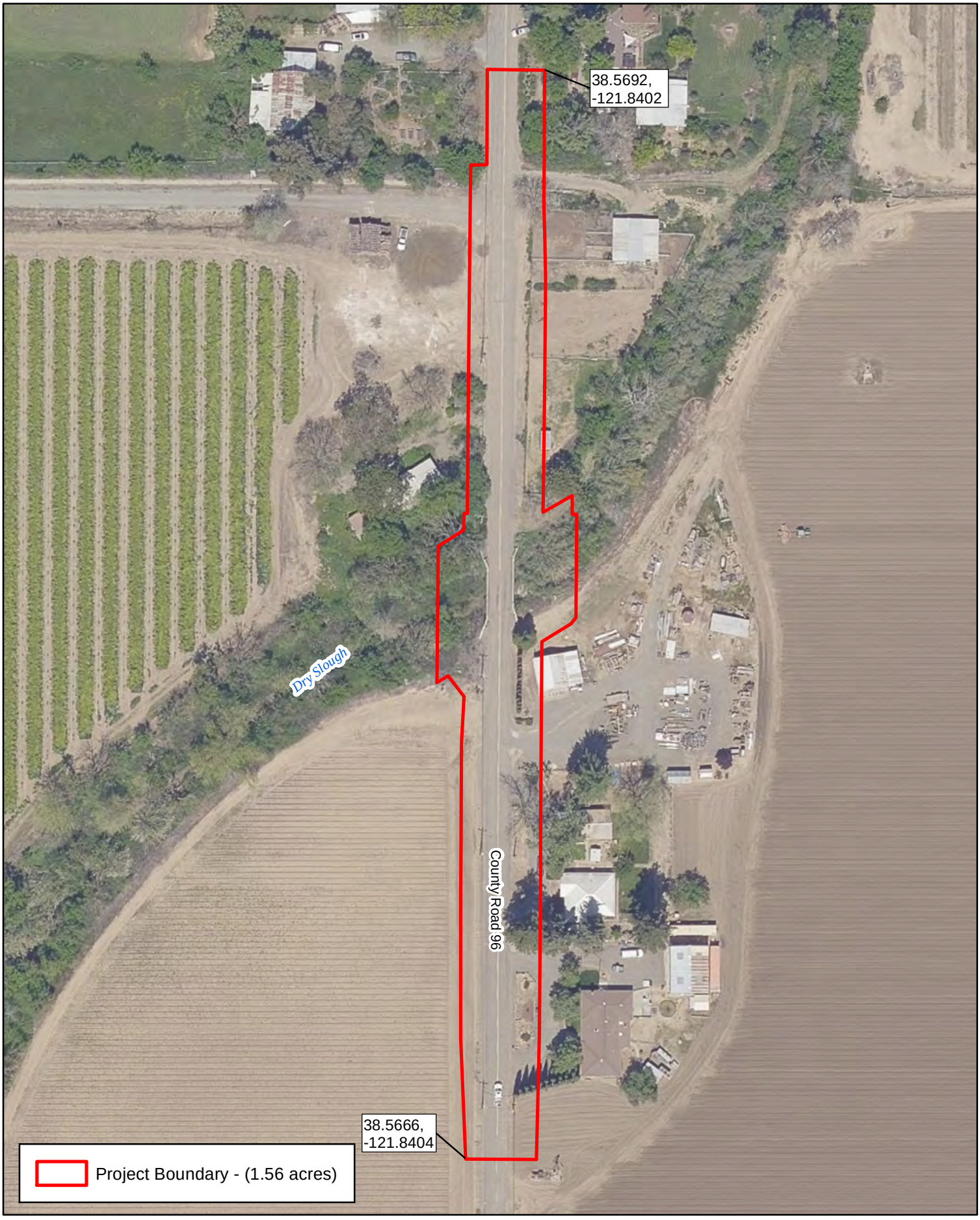
The existing bridge (Bridge No. 22C0127) was constructed in 1929 and is approximately 44 feet long and 20 feet wide. The structure consists of single-span, reinforced concrete T-girders. The bridge has longitudinal and shear cracking along the girders and evidence of water penetration through the deck. Additionally, the bridge railing is in poor condition, with spalling and exposed rebar.



County Road 96 Over Dry Slough
Regional Location Map
Figure 1

gallaway ENTERPRISES

GE: #17-013A Map Date: 12/15/20



NORTH

1:1,300
0 50 100 Feet

Data Sources: ESRI, Yolo County
04/13/2018, Mark Thomas

County Road 96 Over Dry Slough
Project Location Map
Figure 2

gallaway ENTERPRISES

GE: #17-013A Map Date: 12/15/20

The proposed project will construct a new bridge along the same roadway alignment. The new structure will accommodate two 11-foot travel lanes and 2-foot shoulders. The new bridge is anticipated to be a single-span structure, approximately 60 feet long. The structure type is expected to consist of a cast-in-place, post-tensioned concrete slab. The roadway and bridge profile will be lowered slightly to smooth out the existing substandard vertical curve, while still providing clearance over the 100-year storm event.

Construction of the bridge will involve excavation for and construction of concrete abutments, founded on driven piles. The new abutments will be constructed behind the existing abutments and most of this work will occur outside of the waterway. Construction of the roadway approaches will involve the removal of existing pavement and placement of new roadway fill material, aggregate base, hot mix asphalt pavement, and installation of guard rail. Tree removal and removal of other vegetation along the slough will be necessary for the project. Temporary work within Dry Slough includes removal of the existing structure, falsework erection and removal, and installation of scour countermeasures at the abutments. Temporary slough diversion is anticipated in order to complete activities within the waterway.

Relocation of overhead electrical and communication lines, including four utility poles, along the west side of CR 96 is anticipated as part of the project. Although the traveled way and shoulders will remain within the County's right of way, permanent acquisitions may be needed for the approach grading and utility relocation from three to four parcels. Temporary construction easements may be needed from up to seven parcels adjacent to the project to facilitate driveway conforms, utility relocations, and allow construction access.

During construction, CR 96 will be closed to through traffic and a detour route made available. Vehicular traffic will be able to utilize CR 95, 31, and 29 as alternative routes. Construction is anticipated to begin in Spring 2023 and have a duration of approximately 8 months.

Chapter 2 – Study Methods

Biological and botanical surveys were conducted by Gallaway Enterprises after consulting the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) species list, National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) official species list, NOAA NMFS Essential Fish Habitat (EFH) mapper database, California Natural Diversity Database (CNDDB) records, and the California Native Plant Society's (CNPS) list of rare and endangered plants gathered for the Biological Study Area (BSA) (**Appendix A: Species Lists, Figure 3: Biological Study Area**). The BSA for the project includes the roadway and bridge structure where construction will take place, County right-of-way, areas of proposed right-of-way acquisition along County Road 96, and a 10-foot buffer from the areas of direct impact (Fee Buffer) as required by the Yolo HCP/NCCP. Additionally, a map was obtained from the CNDDB Geographic Information System (GIS) database, which provided general locations of species that had recorded CNDDB occurrences within a quarter-mile radius of the project location (**Figure 4: CNDDB Occurrences**). This quarter-mile buffer was utilized based on project proximity requirements implemented in the Yolo HCP/NCCP. Based on the results of the species lists and CNDDB map, appropriate biological, botanical, and planning-level surveys were conducted.

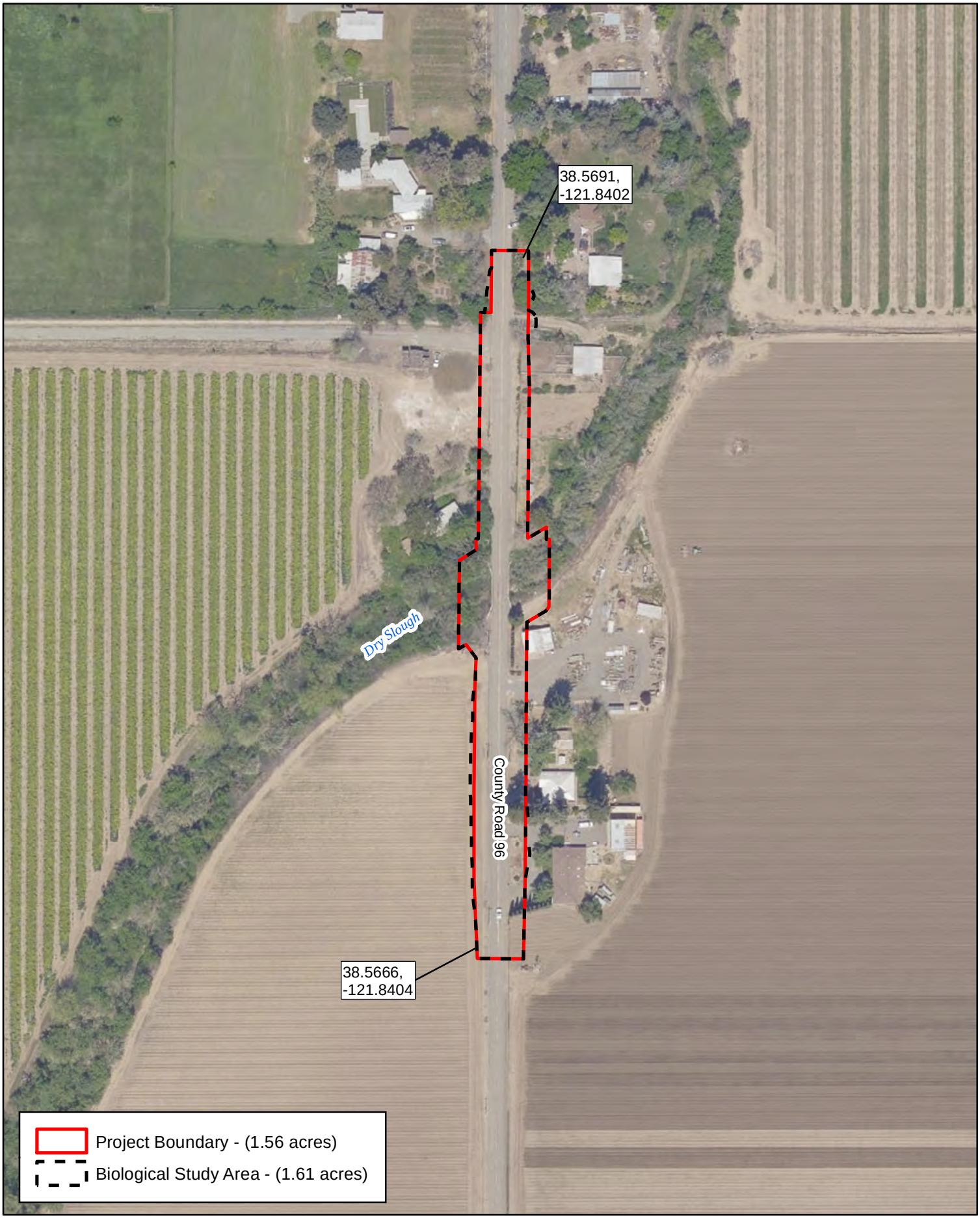
Regulatory Requirements

The following describes federal, state, and local environmental laws and policies that are relevant to the NEPA and CEQA review processes and documents compliance with the Yolo HCP/NCCP Implementation Handbook: Permitting Guide (February 2020).

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 National Environmental Policy Act (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."



NORTH

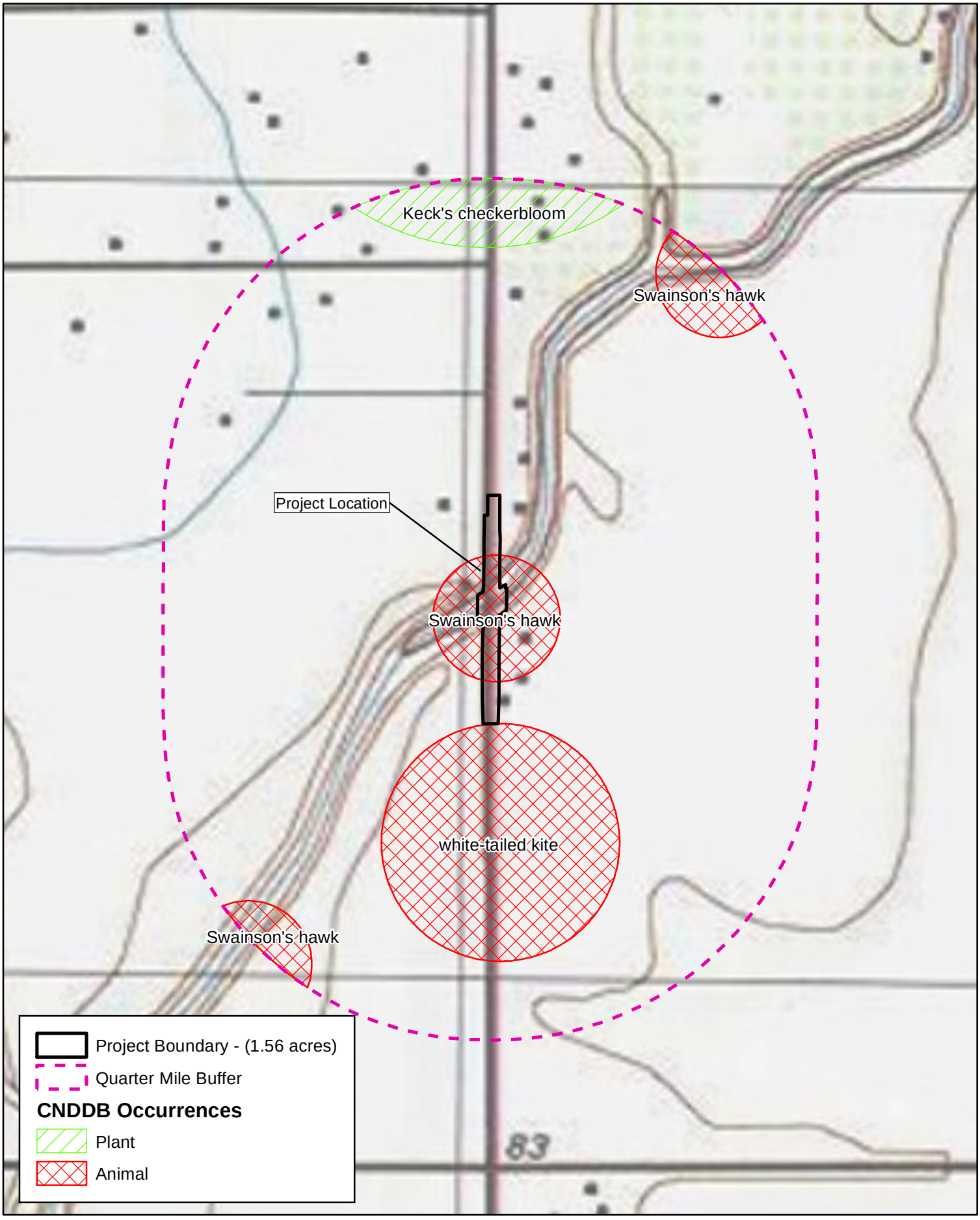
1:2,000
0 50 100 Feet

Data Sources: ESRI, Yolo County
04/13/2018, Mark Thomas

County Road 96 Over Dry Slough
Biological Study Area
Figure 3

gallaway ENTERPRISES

GE: #17-013A Map Date: 12/15/20



NORTH

1:6,200
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Data Sources: ESRI, Yolo County, USGS, Mark Thomas, CNDDB

County Road 96 Over Dry Slough
CNDDB Occurrences
Figure 4

gallaway ENTERPRISES

GE: #17-013A Map Date: 12/15/20

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (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 (CFR) §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. Thus, vegetation removal and ground disturbance in areas with breeding birds should be conducted outside of the breeding season (approximately March 1 through August 31 in the Central Valley). If vegetation removal or ground disturbance activities are conducted during the breeding season, then a qualified biologist must determine if there are any nests of bird species protected under the MBTA present in the construction area prior to commencement of construction. If active nests are located or presumed present, then appropriate avoidance measures (e.g., spatial or temporal buffers) must be implemented.

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

The U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into jurisdictional waters of the United States (WOTUS), under the Clean Water Act (§404). The term "waters of the United States" is an encompassing term that includes "wetlands" and "tributaries." 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." Tributaries are seasonal or perennial water bodies, including lakes, stream channels, drainages, ponds, and other surface water features, that exhibit an ordinary high-water mark 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 Feb 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 California Department of Fish and Wildlife (CDFW) when preparing documents to comply with the California Environmental Quality Act (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 Fish and Game Code

The California Fish and Game Code (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."

Clean Water Act, Section 401

The Clean Water Act (CWA) (§401) requires water quality certification and authorization for placement of dredged or fill material in wetlands and Other Waters of the United States. In accordance with the CWA (§401), criteria for allowable discharges into surface waters have been developed by the State Water Resources Control Board (SWRCB), 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 Regional Water Quality Control Board (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 CFGC (§1600 et seq.). The CFGC (§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.

Rare and Endangered Plants

The California Native Plant Society (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-listed 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 (CFGC §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."

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 CFGC 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.

Yolo County

Yolo Habitat Conservation Plan/Natural Community Conservation Plan

The Yolo HCP/NCCP is a 50-year regional plan that proposes to protect endangered species and natural resources while allowing for orderly development in Yolo County consistent with local General Plans. The plan covers 12 wildlife and plant species and implements guidelines for identifying and minimizing potential impacts to species that are covered under the plan. The NES has been prepared in accordance with the Yolo HCP/NCCP Implementation Handbook: Permitting Guide (February 2020).

Studies Required

Gallaway Enterprises conducted biological and botanical habitat assessments within the BSA. Gallaway Enterprises' qualified biologist Melissa Murphy and senior botanist Elena Gregg conducted planning level surveys and field verified Yolo HCP/NCCP mapped land cover types. Planning level surveys are conducted during the project planning and permitting process. There are two types of planning level surveys: 1) surveys conducted to assess land cover types and covered species habitat, and 2) surveys to determine the presence or absence of covered species through species-specific protocol-level surveys. Information collected during planning level surveys is used to determine land cover impacts, mitigation fees, and applicable avoidance and minimization measures.

Planning level surveys were conducted following review of the Yolo HCP/NCCP, USFWS IPaC report, CNDDB Rarefind 5 report, CNPS list, and the CNDDB occurrence map (**Figure 4: CNDDB Occurrences**). The United States Geological Survey (USGS) "Merritt" 7.5-minute quadrangle was used to derive the agency species lists (**Appendix A: Species Lists**). Based on the results of these inquiries, Gallaway Enterprises conducted planning level surveys and protocol-level surveys to identify any Yolo HCP/NCCP-covered, rare, endangered, threatened, or sensitive species and their habitats that may have the potential to occur within the BSA. The Yolo HCP/NCCP covers 12 species and their

habitats; however, Gallaway biologists conducted habitat assessments for all sensitive wildlife and plant species that could be impacted by the project.

On May 29, 2020, biologists approved by the Yolo HCP/NCCP conducted planning level surveys for land cover types and covered species habitat. When applicable, species-specific surveys were completed. Ms. Murphy and Mrs. Gregg verified the location of the BSA within the Yolo HCP/NCCP designated planning units and the acreage of land cover types present (**Figure 2: Project Location**).

A delineation of waters of the United States (WOTUS) was completed for the BSA. The BSA was surveyed on-foot by Gallaway Enterprises staff on May 29, 2020 to identify potentially jurisdictional features. The surveys involved an examination of botanical resources, soils, hydrological features, and determination of wetland characteristics based on the *Corps of Engineers Wetlands Delineation Manual* (1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (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).

Personnel and Survey Dates

Gallaway Enterprises visited the BSA on May 29, 2020. During the visit, senior biologist Melissa Murphy and senior botanist Elena Gregg conducted planning level surveys as prescribed by the Yolo HCP/NCCP. (**Appendix B: Observed Species List, Appendix C: Project Site Photos**).

Ms. Murphy has over 8 years of experience surveying at the protocol and general level for listed reptiles and amphibians including giant garter snake, California red-legged frog, foothill yellow-legged frog, and western pond turtle. Ms. Murphy has extensive experience PIT tagging reptiles, assisting in de-watering activities including fish relocation, surveying for nesting birds and raptors, capturing and banding waterfowl, and conducting habitat assessments for listed species. She regularly conducts habitat assessments and develops and implements mitigation measures for a variety of private and public works projects throughout northern California. Ms. Murphy is approved by the Yolo Conservancy to conduct surveys prescribed by the Yolo HCP/NCCP.

Mrs. Gregg has over 15 years of 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. Gregg is approved by the Yolo Conservancy to conduct surveys prescribed by the Yolo HCP/NCCP.

Land Cover Mapping and Covered Species Habitat Assessment Verification

The Land Cover Mapping and Covered Species Habitat Assessment and a Planning Level Survey for Land Cover Types and Covered Species Habitat were conducted by walking the entire BSA and identifying specific habitat types and elements. Land within 1,320 feet of the project limits was evaluated for land cover types and the presence of suitable habitat for species covered under the Yolo HCP/NCCP. If suitable 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), micro-climate, surrounding area, presence of predatory species and available resources (e.g., prey items, nesting substrates).

Botanical Habitat Assessment

A botanical habitat assessment was conducted on May 29, 2020 by senior botanist Elena Gregg to assess potential for special-status plant species to occur within the BSA. The assessment was conducted by walking in all accessible areas of the BSA 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 within the BSA. Botanical species observed within the BSA during this field visit are listed in **Appendix A**.

Limitations That May Influence Results

Only lands where Yolo County secured a right of entry were surveyed. Lands outside of the BSA that required analysis by the Yolo HCP/NCCP were done so remotely. There were no other limitations that may influence results of the Land Cover Mapping and Covered Species Habitat Assessment and planning level surveys within the BSA.

Chapter 3 – Results: Environmental Setting

Description of the Existing Biological and Physical Conditions

Study Area

The BSA is the area where the focus of biological surveys is conducted and where all construction and staging will occur (**Figure 3: Biological Study Area**). The BSA includes all anticipated right of way acquisition areas. The survey area encompasses the entire existing CR 96 over Dry Slough Bridge and approaches on both sides on the bridge, as well as the Yolo HCP/NCCP Fee Buffer. The total area of the BSA is 1.61 acres. In accordance with the Yolo HCP/NCCP, land within 1,320 feet of the project limits was evaluated for land cover types and the presence of suitable habitat for species covered under the plan.

Physical Conditions

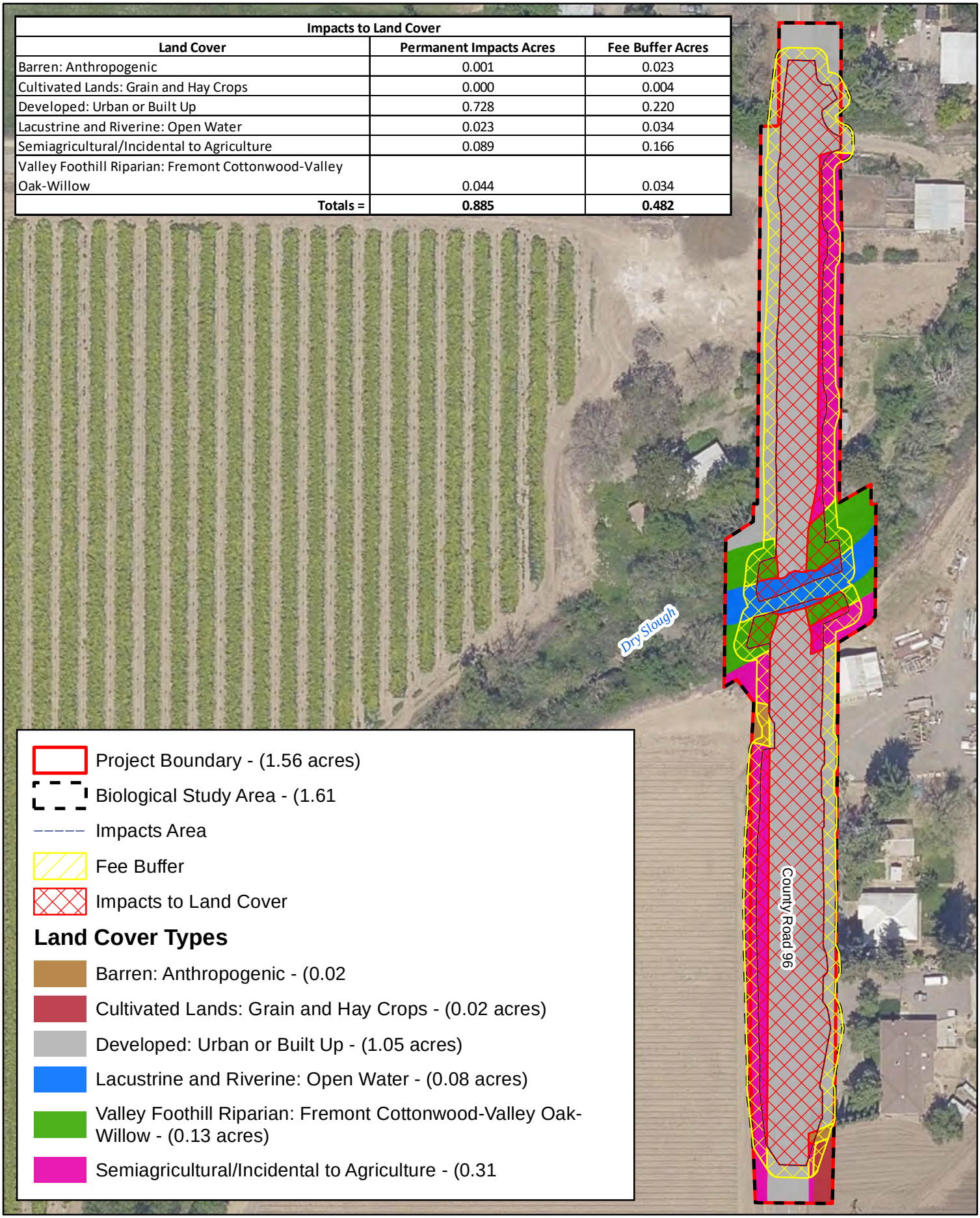
The BSA is located within the Sacramento Valley, west of Davis in unincorporated Yolo County, California. The BSA is composed primarily of existing asphalt roadway, gravel road shoulders, and the bridge spanning Dry Slough. Land within the BSA that occurs outside of the roadway and bridge is composed of Dry Slough (a perennial drainage), a narrow band of valley foothill riparian vegetation along the steep banks, rural residences, and active agricultural land. Soils within the BSA consist of loam. The average annual precipitation for the area is 17.55 inches and the average temperature is 60.35° F (Western Regional Climate Center 2020). The BSA occurs at an elevation of approximately 85 feet above sea level. The overall area is sloped between 0 and 2 percent; however, the banks of Dry Slough are highly channelized with slopes of 70 percent or greater.

Biological Conditions in the Biological Study Area

Land cover types delineated by the Yolo HCP/NCCP within the BSA are Barren: Anthropogenic, Cultivated Lands: Grain and Hay Crops, Developed: Urban or Built Up, Riverine: Open Water, Semiagricultural: Incidental to Agriculture, and Valley Foothill Riparian: Fremont Cottonwood-Valley Oak-Willow (**Figure 5: Impacts to Land Cover**).

Land cover types were mapped within the BSA, including the area where construction will occur and a 10 foot buffer from the areas of permanent impact which is referred to as the “Fee Buffer.” The Yolo HCP/NCCP requires that permanent impacts to land cover types and the Fee Buffer areas be calculated and entered into the application form for coverage under the Yolo HCP/NCCP, thus **Figure 5** includes a column that depicts the permanent impacts to land cover types and well as the Fee Buffer areas.

Impacts to Land Cover		
Land Cover	**Permanent Impacts Acres**	**Fee Buffer Acres**
Barren: Anthropogenic	0.001	0.023
Cultivated Lands: Grain and Hay Crops	0.000	0.004
Developed: Urban or Built Up	0.728	0.220
Lacustrine and Riverine: Open Water	0.023	0.034
Semiagricultural/Incidental to Agriculture	0.089	0.166
Valley Foothill Riparian: Fremont Cottonwood-Valley Oak-Willow	0.044	0.034
Totals =	**0.885**	**0.482**



NORTH

1:1,200
0 50 100 Feet

Data Sources: ESRI, Yolo County
04/13/2018, Mark Thomas

County Road 96 Over Dry Slough
Impacts to Land Cover Types
Figure 5

gallaway ENTERPRISES

GE: #17-013A Map Date: 12/21/20

Yolo HCP/NCCP Land Cover Types

Riverine

The Lacustrine and Riverine land cover type is defined by the Yolo HCP/NCCP as a Sensitive Natural Community (SNC) and is comprised of the open water portions of lakes, rivers, and streams. Within the BSA, there is one (1) drainage that qualifies as Riverine habitat: Dry Slough (**Figure 5**). Dry Slough is a perennial drainage that is used in the summer months to transport agricultural water. Perennial drainages typically flow year-round and have a documented hydrologic connection to a Traditionally Navigable Water. High-flowing water was observed within Dry Slough during the May field visit. Riverine habitat provides food for waterfowl, herons (*Ardeidae* sp.), and many species of insectivorous birds, hawks, and their prey. Riverine habitats support many species of fish, amphibians, reptiles, birds, and mammals (Meyer and Laudenslayer 1988).

Cultivated Lands : Grain and Hay Crops

The Cultivated Lands: Grain and Hay Crops land cover type consists of irrigated and dryland grain and hay crops; predominately wheat, barley, rye, and oat hay. Grain and hay crops do not conform to normal habitat stages and are regulated by the crop cycle in California. Rodents, birds, and some mammals have adapted to field crops and are often controlled by fencing, trapping, and poisoning (Mayer and Laudenslayer 1988). Grain and hay crops may support foraging habitat for Swainson's hawk, white-tailed kite, and tricolored blackbird per the Yolo HCP/NCCP.

Valley Foothill Riparian: Fremont Cottonwood-Valley Oak-Willow

The Valley Foothill Riparian: Fremont Cottonwood-Valley Oak-Willow land cover type is designated as a SNC by the Yolo HCP/NCCP and consists of deciduous trees along streams and rivers, dominated by cottonwoods, willows, and oaks, and areas dominated by herbaceous or shrubby riparian vegetation if less than 1 acre in size. In the BSA, the canopy species include mature valley oak (*Quercus lobata*), Fremont cottonwood (*Populus fremontii*), and tree-of-heaven (*Ailanthus altissima*), a noxious plant. There is a dense shrub layer of sandbar willow (*Salix exigua*), giant reed (*Arundo donax*), and a few mulberry (*Morus* sp.), and an understory of Himalayan blackberry (*Rubus armeniacus*), mugwort (*Artemisia douglasiana*), and perennial pepperweed (*Lepidium latifolium*). Valley foothill riparian habitats provide food, water, migration, and dispersal corridors for fish species, and escape, nesting, and thermal cover for an abundance of other wildlife species. Within the BSA, the Fremont Cottonwood-Valley Oak-Willow land cover type occurs along the banks of Dry Slough.

Developed: Urban

The Developed: Urban land cover type consists of areas dominated by pavement and building structures, including barren lands graded for development. This environment can present a mosaic of vegetation, including primarily ornamental landscaping, but can also incorporate native tree species. Generalist and invasive species often occupy urban habitat such as common raven (*Corvus corax*), house sparrow (*Passer domesticus*), scrub-jay (*Aphelocoma californica*), and Brewer's blackbird (*Euphagus cyanocephalus*), as well as small to medium mammals (e.g., raccoon, opossum, striped skunk) (Mayer and Laudenslayer 1988).

Semiagricultural/Incidental to Agriculture

Semiagricultural areas include livestock feedlots, farmsteads, and miscellaneous semiagricultural features such as small roads, ditches, and unplanted areas of cropped fields (e.g., field edges). The Semiagricultural land cover type provides marginal potential habitat for wildlife.

Regional Species and Habitats and Natural Communities of Concern

The following special-status species were identified under the Yolo HCP/NCCP, USFWS IPaC species list, NOAA-NMFS official species list, CNDDB Rarefind 5, and the CNPS inventory of rare and endangered plants as having potential to occur within the vicinity of the BSA and/or having recorded observations within or within close proximity of the BSA. Not all special-status species listed under federal and state species lists have potential to occur within the BSA due to unsuitable habitat or lack of observations in the area. A summary of special-status species listed in the Yolo HCP/NCCP, USFWS IPaC, CNDDB, and the CNPS species lists derived from the "Merritt" USGS 7.5-minute quadrangle and their potential to occur within the BSA is described in **Table 1**.

Table 1: Listed and Proposed Species, Natural Communities, and Critical Habitat Potentially Occurring or Known to Occur in the CR 96 over Dry Slough Bridge Replacement Project Area.

Common Name	Scientific Name	Status Fed, State, CNPS, HCP	General Habitat Description	Habitat Present/ Absent	Rationale
SENSITIVE NATURAL COMMUNITIES					
Riverine	N/A	HCP	The open water portions of rivers and streams.	HP	There is Riverine Natural Community present within the BSA.
Valley Foothill Riparian	N/A	HCP	Scrubby vegetation, deciduous trees, and alder, willow, and oak forests associated with streams and riparian areas.	HP	There is Valley Foothill Riparian Natural Community present within the BSA.

PLANTS					
California alkali grass	*Puccinellia simplex*	1B.2	Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools. (BP: Mar - May)	A	There is no suitable habitat within the BSA. This species was not observed during the protocol-level survey conducted within the BSA on May 29, 2020.
Ferris' milk-vetch	*Astragalus tener var. ferrisiae*	1B.1	Meadow & seep, Valley & foothill grassland, Wetland. (BP: Apr–May)	A	There is no suitable wetland habitat present in the BSA. This species was not observed during the protocol-level survey conducted within the BSA on May 29, 2020.
Heartscale	*Atriplex cordulata var. cordulata*	1B.2	Chenopod scrub, meadows and seeps, valley/foothill grassland (sandy), in saline or alkaline soils. (BP: Apr -Oct)	A	There is no suitable habitat within the BSA. This species was not observed during the protocol-level survey conducted within the BSA on May 29, 2020.
Keck's checkerbloom	*Sidalcea keckii*	FE/1B.1	Grassy slopes in blue oak woodland. On serpentine-derived, clay soils, at least sometimes. Found at elevations between 85-505 meters. (BP: Apr-May)	A	There is no blue oak woodland within the BSA. The BSA is outside of the species known elevational range. This species was not observed during the protocol-level survey conducted within the BSA on May 29, 2020. No effect.
Palmate-bracted bird's beak	*Chloropyron palmatum*	FE/SE/1.B1/HCP	Alkali prairie land cover type. (BP: May - Oct)	A	There is no suitable habitat within 250 feet of the BSA. This species was not observed during the protocol-level survey conducted within the BSA on May 29, 2020. No effect.
INVERTEBRATES					
Crotch bumble bee	*Bombus crotchii*	SC	Grassland and scrub habitats. Nests underground. Forages at open flowers with short corollas.	A	There are no grassland nor scrub habitats within the BSA. Floral resources are limited due to agricultural practices within the BSA.
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	FT/HCP	Blue elderberry shrubs usually associated with riparian areas.	A	No elderberry shrubs were observed within the BSA during the field visit. No effect.
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT	Moderately turbid, deep, cool-water vernal pool.	A	There are no vernal pools within the BSA. No effect.
Vernal pool tadpole shrimp	*Lepidurus packardi*	FE	Vernal pools, swales, and ephemeral freshwater habitat.	A	There are no vernal pools within the BSA. No effect.
Western bumble bee	*Bombus occidentalis*	SC	Meadows and grasslands with abundant floral resources. Largely confined to high elevation sites. Nests underground in cavities such as old squirrel or other animal nests and in open west-southwest slopes bordered by trees.	A	There are no grassland nor meadow habitats within the BSA. Floral resources are limited due to agricultural practices within the BSA.

AMPHIBIANS AND REPTILES					
California red-legged frog	*Rana draytonii*	FT/SSC	Inhabits quiet pools of streams, marshes, and occasionally ponds.	A	California red-legged frogs have been extirpated from the valley floor since the 1960s (USFWS 2002). There are no CNDDB occurrences within 20 miles of the BSA. No effect.
California tiger salamander *Central California DPS*	*Ambystoma californiense*	FT/ST/HCP	Vernal pools, alkali sinks, ponds, grasslands, blue oak woodlands, blue oak-foothill pine, valley oak alliance, and pastures occurring within Planning Units 4, 5, 13, 16, or 18.	A	There is no suitable breeding habitat within 500 feet of the BSA and the surrounding agricultural practices preclude suitable upland burrows. California tiger salamander are not expected to occur within the BSA's Planning Unit (11). No effect.
Giant garter snake	*Thamnophis gigas*	FT/ST/HCP	Agricultural wetlands and ricelands and other wetlands such as irrigation and drainage canals, low gradient streams, marshes ponds, sloughs, small lakes, and their associated uplands located east of Highway 113 and Interstate 5.	A	Per the HCP/NCCP, there is no suitable habitat for giant garter snake west of Highway 113 and Interstate 5 where the BSA is located. There is no suitable habitat within 500 feet of the BSA. No effect.
Western pond turtle	*Emys marmorata*	SSC/HCP	Ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft. elevation.	HP	The BSA contains suitable aquatic habitat for this species.
Western spadefoot	*Spea hammondii*	SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Open, sparsely vegetated, intermittent pools are essential for breeding and egg-laying (January through May).	A	Dry Slough is not suitable habitat for western spadefoot due to heavy vegetative cover (USFWS 2005) and lack of suitable aestivation habitat.
FISH					
Chinook salmon *Central Valley spring-run ESU*	*Oncorhynchus tshawytscha*	FT/ST	Sacramento River and its tributaries.	A	The perennial stream present does not provide suitable habitat and barriers exist between downstream population and the BSA. No effect.
Chinook salmon *Sacramento River winter-run ESU*	*Oncorhynchus tshawytscha*	FE/SE	Sacramento River and its tributaries.	A	The perennial stream present does not provide suitable habitat and barriers exist between downstream population and the BSA. No effect.
Delta smelt	*Hypomesus transpacificus*	FT/SE	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait & San Pablo Bay.	A	The BSA is outside of this species known range. No effect.

Steelhead *California Central Valley DPS*	*Oncorhynchus mykiss irideus*	FT	Sacramento and San Joaquin rivers and their tributaries.	A	The perennial stream present does not provide suitable habitat and barriers exist between downstream population and the BSA. No effect.
BIRDS					
Bank swallow	*Riparia riparia*	ST/HCP	Barren- gravel and sand bars land cover types in Planning Units 6, 7, 12, 14, or 17.	A	There is no suitable habitat within 500 feet of the BSA. The BSA is located in Planning Unit 11, which does not contain suitable habitat for this species.
Burrowing owl	*Athene cunicularia*	SSC/HCP	California annual grassland alliance and barren-anthropogenic land cover types, cultivated lands/pasture, alfalfa.	A	The surrounding agricultural practices eliminate the potential establishment of nesting burrows. There is no suitable habitat within 500 feet of the BSA.
Least Bell's vireo	*Vireo bellii pusillus*	FE/SE/HCP	Blackberry alliance, coyote brush, Fremont Cottonwood-valley oak-willow riparian forest association, Mixed Fremont cottonwood-willow, mixed willow alliance, and white alder (mixed willow) riparian forest land cover types located within Planning Units 7, 9, 12, 14, 17, or 18.	A	There is no suitable nesting habitat present within the BSA and the BSA is not located within 500 feet of Yolo HCP/NCCP modeled habitat. The BSA is located in Planning Unit 11, which does not contain suitable habitat for this species. No effect.
Northern harrier	*Circus hudsonius*	SSC	Coastal salt & freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas.	HP	The nearest CNDDB occurrence (#51) is located approximately 4.9 miles east of the BSA within a wheat field. There are suitable agricultural fields that could support nesting and foraging activity for this species within the BSA.
Swainson's hawk	*Buteo swainsoni*	ST/HCP	Open grasslands, shrublands and agricultural fields, often near riparian forests.	HP	There is suitable nesting and foraging habitat within the BSA.
Tricolored blackbird	*Agelaius tricolor*	ST/HCP	Colonial nester in large freshwater marshes. Requires open, accessible water source and does most of its foraging in open habitats such as farm fields, pastures, cattle pens, large lawns.	HP	Tricolored blackbirds have adapted to nesting in blackberry brambles and dryland grain crops, which occur within the BSA. Dryland grain crops within and adjacent to the BSA may provide suitable foraging habitat.

Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	FT/SE/HCP	Fremont Cottonwood-valley oak-willow (ash-sycamore) riparian forest association, mixed Fremont cottonwood-willow alliance, and white alder (mixed willow) riparian forest land cover types that occur in patch sizes of 25 acres or greater with a width of at least 330 feet.	A	The BSA is located within what is modeled as western yellow-billed cuckoo habitat by the Yolo HCP/NCCP; however, there is no suitable nesting habitat present within the BSA. No effect.
White-tailed kite	*Elanus leucurus*	FP/HCP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes often next to deciduous woodlands.	HP	There are suitable nesting trees and foraging habitat within the BSA.
MAMMALS					
American badger	*Taxidea taxus*	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	A	The surrounding agricultural practices and urban development eliminate the potential establishment of badger dens within the BSA.
Pallid bat	*Antrozous pallidus*	SSC	Deserts, grasslands, shrubland, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	HP	There is suitable habitat in plugged drainage hole in existing bridge, as well as in the peeling bark or crevices of trees within the BSA.

Absent [A] - no habitat present and no further work needed. Habitat Present [HP] -habitat is, or 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 Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC); State Endangered (SE); State Threatened (ST); Fully Protected (FP); State Candidate (SC); State Rare (SR); State Species of Special Concern (SSC); California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) 1B = Rare or Endangered in California or elsewhere; CRPR 2 = Rare or Endangered in California, more common elsewhere; CRPR 3 = More information is needed; CRPR 4 = Plants with limited distribution; 0.1=Seriously Threatened; 0.2= Fairly Threatened; 0.3= Not very Threatened; Covered under the Yolo Habitat Conservation Plan/Natural Community Conservation Plan (Yolo HCP/NCCP).

Chapter 4 – Results: Biological Resources, Discussion of Impacts and Mitigation

Waters of the United States

A delineation of WOTUS was performed for the entire project boundary (**Appendix D: Draft Delineation of Waters of the US Map**). Project impacts to potentially jurisdictional WOTUS were determined by overlaying the project plans over the delineation map. **Figure 6** depicts the anticipated impacts to WOTUS. There will be 0.023 acres of permanent impacts to Dry Slough, a jurisdictional perennial drainage. No impacts to wetlands as currently defined by the Clean Water Act will occur. 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.

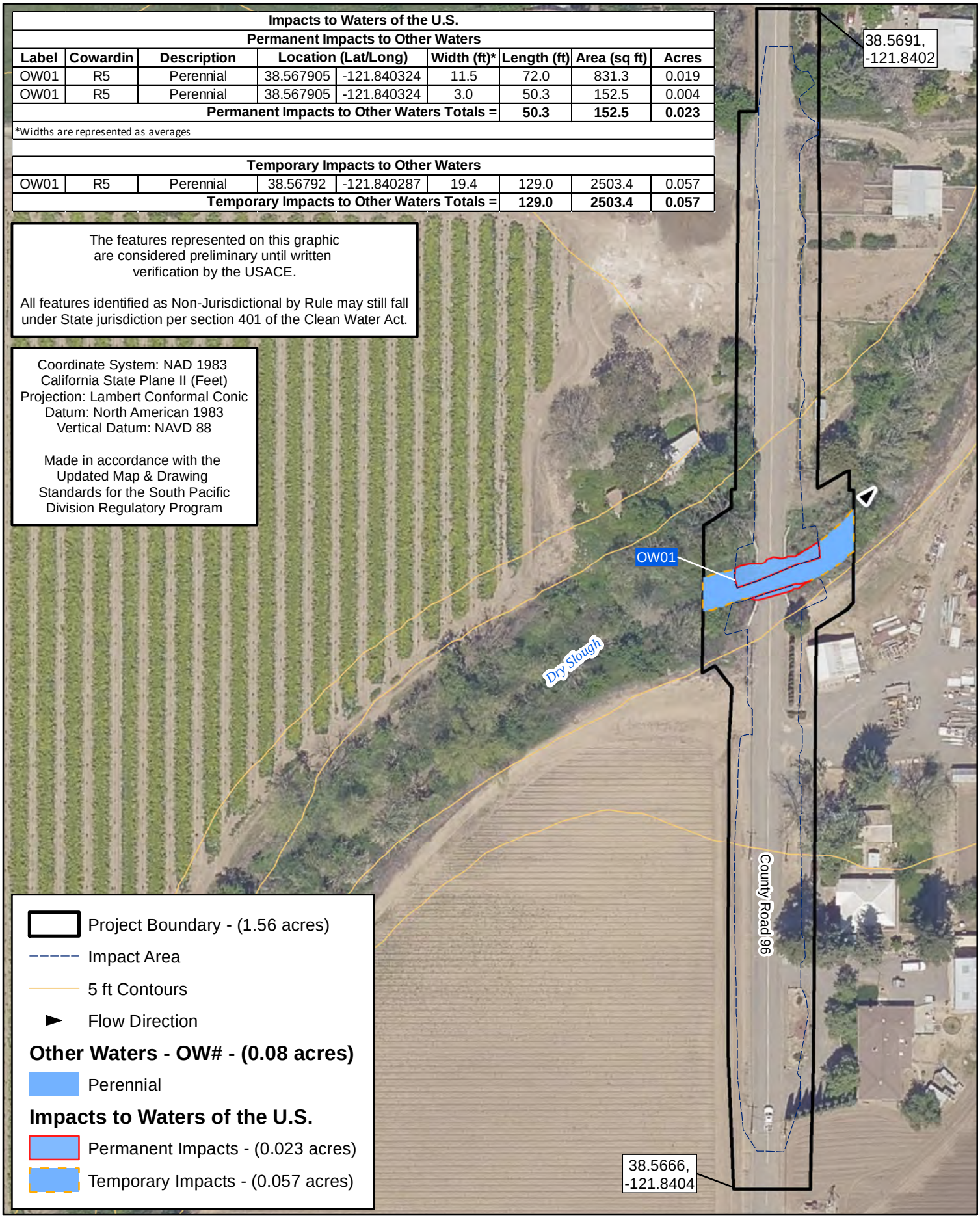
Habitats and Natural Communities of Special Concern

All land cover types that occur within the BSA, except Barren and Developed, require mitigation fees for impacts. Barren, Cultivated Lands, Developed, and Semiagricultural land cover types provide limited habitat for wildlife and plant species due to high levels of disturbance and lack of vegetation. In this section, only land cover types designated as Sensitive Natural Communities by the Yolo HCP/NCCP are discussed.

Riverine

The Riverine land cover type is identified as a SNC by the Yolo HCP/NCCP and is defined as the open water portions of rivers and streams. Within the BSA, Dry Slough provides Riverine habitat. Dry Slough has been identified as a perennial drainage that is used in the summer months to transport agricultural water. The section of Dry Slough within the BSA is highly channelized.

Perennially aquatic natural communities usually support fish, which may affect suitability for invertebrates, amphibians, and some reptiles. Turbidity, water temperature, and oxygen content affect the quality of habitat for many plant and animal species, including covered species. The concentration and characteristics of the particles that cause turbidity within the water column affect the quantity and quality of light penetration, which affects plant and algal growth rates. Water temperature varies by season and depth within the water column. Riverine habitat also provides food for waterfowl, herons (*Ardeidae* sp.), and many species of insectivorous birds, hawks, and their prey. Anadromous fish do not occur within Dry Slough due to known fish passage barriers.



Impacts to Waters of the U.S.								
Permanent Impacts to Other Waters								
Label	**Cowardin**	**Description**	**Location (Lat/Long)**		**Width (ft)***	**Length (ft)**	**Area (sq ft)**	**Acres**
OW01	R5	Perennial	38.567905	-121.840324	11.5	72.0	831.3	0.019
OW01	R5	Perennial	38.567905	-121.840324	3.0	50.3	152.5	0.004
				Permanent Impacts to Other Waters Totals =		**50.3**	**152.5**	**0.023**
*Widths are represented as averages								
Temporary Impacts to Other Waters								
OW01	R5	Perennial	38.56792	-121.840287	19.4	129.0	2503.4	0.057
				Temporary Impacts to Other Waters Totals =		**129.0**	**2503.4**	**0.057**

The features represented on this graphic are considered preliminary until written verification by the USACE.

All features identified as Non-Jurisdictional by Rule may still fall under State jurisdiction per section 401 of the Clean Water Act.

Coordinate System: NAD 1983
California State Plane II (Feet)
Projection: Lambert Conformal Conic
Datum: North American 1983
Vertical Datum: NAVD 88

Made in accordance with the Updated Map & Drawing Standards for the South Pacific Division Regulatory Program

Project Boundary - (1.56 acres)
Impact Area
5 ft Contours
Flow Direction

Other Waters - OW# - (0.08 acres)
Perennial

Impacts to Waters of the U.S.
Permanent Impacts - (0.023 acres)
Temporary Impacts - (0.057 acres)

NORTH

1:1,200
1 inch = 100 feet
0 50 100 Feet

Data Sources: ESRI, Yolo County
04/13/2018, Mark Thomas

County Road 96 Over Dry Slough
Anticipated Impacts to Waters of the U.S.
Figure 6

gallaway ENTERPRISES

GE: #17-013A Map Date: 12/15/20

Survey Results

Dry Slough provides Riverine SNC within the BSA.

Project Impacts

The proposed project is anticipated to permanently impact approximately 0.023 acres of the Riverine SNC due to the placement of the new bridge abutments and Rock Slope Protection (RSP). The project will temporarily impact 0.057 acres of Riverine SNC due to construction occurring within the channel, which will likely include dewatering activities. Avoidance and minimization measures will be implemented to ensure effects are minimized.

Avoidance and Minimization Efforts

Avoidance and minimization measures (AMMs) for Sensitive Natural Communities are designated by the HCP/NCCP.

AMM1, Establish Buffers. Project proponents will design projects to avoid and minimize direct and indirect effects of permanent development on the sensitive natural communities and covered species habitat by providing buffers, as stipulated in the relevant sensitive natural community AMMs and covered species AMMs. On lands owned by the project proponent, the project proponent will establish a conservation easement, consistent with Yolo HCP/NCCP Section 6.4.1.3, Land Protection Mechanisms, to protect the buffer permanently if that land is being offered in lieu of development fees, as described in Yolo HCP/NCCP Section 4.2.2.6, Item 6: HCP/NCCP Fees or Equivalent Mitigation. The project proponent will design buffer zones adjacent to permanent residential development projects to control access by humans and pets (AMM2, Design Developments to Minimize Indirect Effects at Urban-Habitat Interfaces).

Where existing development is already within the stipulated buffer distance (i.e., existing uses prevent establishment of the full buffer), the development will not encroach farther into the space between the development and the sensitive natural community.

This AMM does not apply to seasonal construction buffers for covered species, which are detailed for each species in Yolo HCP/NCCP Section 4.3.4, Covered Species.

A lesser buffer than is stipulated in the AMMs may be approved by the Yolo Conservancy, USFWS, and CDFW if they determine that the sensitive natural community or covered species is avoided to an extent that is consistent with the project purpose (e.g., if the purpose of the project is to provide a stream crossing or replace a bridge, the project may encroach into the buffer and the natural community or species habitat to the extent that is necessary to fulfill the project purpose).

AMM9, Establish Buffers around Sensitive Natural Communities

Lacustrine and Riverine: Outside urban planning units, 100 feet from the top of banks (defined as the area within which water is contained in a channel). Within urban planning units, 25 feet from the top of the banks. If avoidance is infeasible, a lesser buffer or encroachment into the sensitive natural community may be allowed if approved by the Conservancy and the wildlife agencies, based on the criteria listed in AMM1. Transportation or utility crossings may encroach into this sensitive natural community provided effects are minimized and all other applicable AMMs are followed.

AMM10, Avoid and Minimize Effects on Wetlands and Waters. Project proponents will comply with stormwater management plans that regulate development as part of compliance with regulations under National Pollutant Discharge Elimination System (NPDES) permit requirements. Covered activities that result in any fill of waters or wetlands will also comply with requirements under Section 404 of the Clean Water Act, State Water Resources Control Board (State Board), Fish and Game Code Section 1602, and Regional Board regulations. Other than requirements for buffers, minimizing project footprint, and species-specific measures for wetland-dependent covered species, this HCP/NCCP does not include specific best management practices (BMPs) for protecting wetlands and waters because they may conflict with measures required by the Corps, State Board, Regional Board, and CDFW.

Cumulative Impacts

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

Compensatory Mitigation

Impacts to 0.023 acres of Riverine habitat will be mitigated for in accordance with the Yolo HCP/NCCP (**Appendix E: Yolo HCP/NCCP Application Form 4**). Additionally, 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.

Valley Foothill Riparian

The Fremont Cottonwood-Valley Oak-Willow land cover type is designated as part of the Valley Foothill Riparian SNC by the Yolo HCP/NCCP. A narrow band of Valley Foothill Riparian SNC occurs along Dry Slough within the BSA.

This habitat contains a multilayered woodland plant community with a tree overstory and diverse shrub layer. Canopy species include mature valley oak (*Quercus lobata*), Fremont cottonwood (*Populus fremontii*), ash (*Fraxinus* sp.), and willow (*Salix* sp.). In a mature riparian forest, canopy heights reach approximately 100 feet, and canopy cover ranges from 20 to 80 percent. California rose (*Rosa californica*), poison oak (*Toxicodendron diversilobum*), and blackberry (*Rubus* sp.) may form dense thickets in the understory of mature riparian forests. California grape (*Vitis californica*) creates a dense network of vines in the canopy. In areas that are disturbed by frequent flooding, fire, or human activity, this natural community often consists of smaller trees, more shrubs, and more invasive nonnative species.

The Valley Foothill Riparian SNC supports a diversity of plant and animal species and a variety of specialized plant and animal species that are restricted to this natural community for all or important parts of their life cycle. It provides nesting habitat and cover for many wildlife species. It also provides continuous corridors and isolated matrix stopover habitat that facilitates movement between habitat areas for many wildlife species. Riparian natural communities are the most productive among California's natural communities because they receive abundant water during the hot, dry summers of California's Mediterranean climate.

Some of the common wildlife species found in the Valley Foothill Riparian SNC include the red-shouldered hawk (*Buteo lineatus*), scrub-jay, downy woodpecker (*Picoides pubescens*), American crow (*Corvus brachyrhynchos*), bushtit (*Psaltriparus minimus*), oak titmouse (*Baeolophus inornatus*), and various rodents.

Survey Results

Fremont Cottonwood-Valley Oak-Willow land cover type within the Valley Foothill Riparian SNC occurs along the banks of Dry Slough within the BSA.

Project Impacts

The project is anticipated to impact 0.044 acres of Fremont Cottonwood-Valley Oak-Willow land cover type within the Valley Foothill Riparian SNC.

Avoidance and Minimization Efforts

AMM8, Avoid and Minimize Effects of Construction Staging Areas and Temporary Work Areas. Project proponents should locate construction staging and other temporary work areas for covered activities in areas that will ultimately be a part of the permanent project development footprint. If construction staging and other temporary work areas must be located outside of permanent project footprints, they will be located either in areas that do not support habitat for covered species or are easily restored to prior or

improved ecological functions (e.g., grassland and agricultural land). Construction staging and other temporary work areas located outside of project footprints will be sited in areas that avoid adverse effects on the valley foothill riparian land cover type.

Project proponents will follow specific AMMs for sensitive natural communities (Section 4.3.3, Sensitive Natural Communities) and covered species (Section 4.3.4, Covered Species) in temporary staging and work areas. For establishment of temporary work areas outside of the project footprint, project proponents will conduct surveys to determine if any of the biological resources listed above are present.

Within one year following removal of land cover, project proponents will restore temporary work and staging areas to a condition equal to or greater than the covered species habitat function of the affected habitat.

Restoration of vegetation in temporary work and staging areas will use clean, native seed mixes approved by the Conservancy..

AMM9, Establish Buffers around Sensitive Natural Communities

Valley Foothill Riparian: One hundred feet from canopy dripline. If avoidance is infeasible, a lesser buffer or encroachment into the sensitive natural community may be allowed if approved by the Conservancy and the wildlife agencies, based on the criteria listed in AMM1. Transportation or utility crossings may encroach into this sensitive natural community provided effects are minimized and all other applicable AMMs are followed.

Cumulative Impacts

There are no current or planned projects that will have cumulative effects on Valley Foothill Riparian SNC within the project BSA.

Compensatory Mitigation

Impacts to 0.044 acres of Fremont Cottonwood-Valley Oak-Willow land cover type within the Valley Foothill Riparian SNC will be mitigated for in accordance with the Yolo HCP/NCCP (**Appendix E: Yolo HCP/NCCP Application Form 4**).

Special Status Plant Species

There is no suitable habitat for special-status plant species within the BSA. All of the plant species from the federal and state species lists and the Yolo HCP/NCCP do not have potential to occur within the BSA, due to either the lack of suitable habitat elements or due to the extensive farming and agricultural activities occurring within the

BSA. Historic CNDDB occurrences of special-status plant species within the vicinity of the BSA have been extirpated from the area due to agricultural practices and urban development. There are no further botanical surveys recommended.

Special Status Animal Species Occurrences

There is suitable habitat within the BSA for Swainson's hawk, white-tailed kite, western pond turtle, tricolored blackbird, northern harrier, pallid bat, and migratory birds and raptors protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC). There is Yolo HCP/NCCP modeled habitat for western yellow-billed cuckoo within the BSA.

Western Pond Turtle

The western pond turtle is a Species of Special Concern in California and is a covered species under the Yolo HCP/NCCP. 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 4 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

Dry Slough provides suitable aquatic habitat for western pond turtle.

Project Impacts

The project will impact 0.023 acres of Riverine SNC that could potentially serve as western pond turtle habitat. The BSA contains Riverine SNC, which triggers AMMs per the Yolo HCP/NCCP that typically adequately protect western pond turtles. The implementation of a 100-foot avoidance buffer from the top of the banks of Dry Slough will not be feasible due to the nature of the project. Per AMM1, the project purpose of bridge replacement allows for the encroachment into the resource protection buffer to the extent that is necessary to fulfill the project purpose. There will be no impacts to

western pond turtle individuals with the implementation of the AMMs that otherwise protect western pond turtles.

Habitat modeled by the Yolo HCP/NCCP for western pond turtle will be impacted by the project.

Avoidance and Minimization Efforts

AMM14, Minimize Take and Adverse Effects on Habitat of Western Pond Turtle. There are no specific design requirements for western pond turtle habitat, however, project proponents must follow design requirements for the valley foothill riparian and lacustrine and riverine natural communities described in AMMs 9 and 10, which require a 100-foot (minimum) permanent buffer zone from the canopy drip-line (the farthest edge on the ground where water will drip from the tree canopy, based on the outer boundary of the tree canopy).

A lesser buffer than is stipulated in the AMMs may be approved by the Yolo Conservancy, USFWS, and CDFW if they determine that the sensitive natural community or covered species is avoided to an extent that is consistent with the project purpose (e.g., if the purpose of the project is to provide a stream crossing or replace a bridge, the project may encroach into the buffer and the natural community or species habitat to the extent that is necessary to fulfill the project purpose).

If modeled upland habitat will be impacted, a qualified biologist must be present and will assess the likelihood of western pond turtle nests occurring in the disturbance area (based on sun exposure, soil conditions, and other species habitat requirements). If a qualified biologist determines that there is a moderate to high likelihood of western pond turtle nests within the disturbance area, the qualified biologist will monitor all initial ground-disturbing activity for nests that may be unearthed during the disturbance, and will move out of harm's way any turtles or hatchlings found.

Cumulative Impacts

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

Compensatory Mitigation

The project is anticipated to permanently impact 0.023 acres of Riverine SNC that could potentially serve as western pond turtle aquatic habitat, as well as 0.044 acres of Valley Foothill Riparian land cover type that may potentially serve as nesting and wintering habitat. Impacts to land cover types that may support western pond turtle will be mitigated by paying fees in accordance with the Yolo HCP/NCCP (**Appendix D: Yolo HCP/NCCP Application Form 4**).

Swainson's Hawk

Swainson's hawks are listed as threatened in the State of California and are a covered species under the Yolo HCP/NCCP. They are found throughout the western part of the United States and from Canada to Mexico. Swainson's hawks are a fairly large, slender hawk with three different color morph displays. The most common morph in northern California is the dark morph, which demonstrates black to dark brown under coverts and flight feathers. Swainson's hawks primarily nest in riparian forests next to open fields that provide foraging opportunities. Nesting and courtship begin in April. Current threats facing the Swainson's hawk are loss of nesting and foraging habitat, change in agricultural regimes, pesticides, poaching, and human disturbances (CDFW 1994).

Survey Results

There are suitable nesting trees within the BSA and suitable foraging habitat in the form of open agricultural fields within and adjacent to the BSA. There were no active Swainson's hawk nests observed during the biological evaluation; however, based on the size of the trees within the BSA, there is potential for future nest establishment. Furthermore, there are CNDDB records of Swainson's hawks nesting within (#460) and adjacent (#720, #731, #432) to the BSA. None of these nesting occurrences are active (i.e., nesting activity observed within the last 5 years); however, there are multiple active nesting occurrences within 10 miles of the BSA (#98, #614, #871, #1709, #1995, #2677, #2688, #2689).

There is potential for Swainson's hawk to occur within the BSA due to the presence of suitable nesting and foraging habitat within and adjacent to the BSA, as well as past CNDDB records of nesting Swainson's hawk within and adjacent to the BSA.

Project Impacts

The project will impact 0.044 acres of Valley Foothill Riparian land cover type that could potentially serve as Swainson's hawk nesting habitat as defined by the Yolo HCP/NCCP. The BSA contains Swainson's hawk foraging habitat and nest trees, which triggers avoidance and minimization measures per the Yolo HCP/NCCP. There will be no impacts to Swainson's hawk individuals with the implementation of avoidance and minimization measures.

Avoidance and Minimization Efforts for Swainson's Hawk and White-tailed Kite

The following are recommended avoidance and minimization measures for Swainson's hawk and white-tailed kite as specified by the Yolo HCP/NCCP:

AMM16, Minimize Take and Adverse Effects on Habitat of Swainson's Hawk and White-tailed Kite. The project proponent will retain a qualified biologist to conduct planning-

level surveys and identify any nesting habitat present within 1,320 feet of the project footprint.

Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas.

If a construction project cannot avoid potential nest trees (as determined by the qualified biologist) by 1,320 feet, the project proponent will retain a qualified biologist to conduct preconstruction surveys for active nests consistent, with guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000), between March 15 and August 30, within 15 days prior to the beginning of the construction activity. The results of the survey will be submitted to the Conservancy and CDFW. If active nests are found during preconstruction surveys, a 1,320-foot initial temporary nest disturbance buffer shall be established. If project related activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then the qualified biologist will monitor the nest and will, along with the project proponent, consult with CDFW to determine the best course of action necessary to avoid nest abandonment or take of individuals. Work may be allowed only to proceed within the temporary nest disturbance buffer if Swainson's hawk or white-tailed kite are not exhibiting agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, and only with the agreement of CDFW and USFWS. The designated on-site biologist/monitor shall be on-site daily while construction-related activities are taking place within the 1,320-foot buffer and shall have the authority to stop work if raptors are exhibiting agitated behavior. Up to 20 Swainson's hawk nest trees (documented nesting within the last 5 years) may be removed during the permit term, but they must be removed when not occupied by Swainson's hawks.

For covered activities that involve pruning or removal of a potential Swainson's hawk or white-tailed kite nest tree, the project proponent will conduct preconstruction surveys that are consistent with the guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000). If active nests are found during preconstruction surveys, no tree pruning or removal of the nest tree will occur during the period between March 1 and August 30 within 1,320 feet of an active nest, unless a qualified biologist determines that the young have fledged and the nest is no longer active**.**

Cumulative Impacts

There are no current or planned projects that will have cumulative effects on Swainson's hawk or Swainson's hawk foraging habitat within the project BSA.

Compensatory Mitigation

Per the Yolo HCP/NCCP, there is 0.044 acres of Valley Foothill Riparian SNC that could potentially serve as Swainson's hawk nesting habitat within the area of impact. Impacts to Valley Foothill Riparian SNC will be mitigated for in accordance with the Yolo HCP/NCCP (**Appendix E: Yolo HCP/NCCP Application Form 4**).

White-tailed Kite

The white-tailed kite (*Elanus leucurus*) was listed as Fully Protected by the State of California in 1957. White-tailed kites are also protected under the MBTA (16 USC §703) and CFGC §3503, and are a covered species under the Yolo HCP/NCCP. They are yearlong residents in coastal and valley lowlands; frequently found near agricultural areas. White-tailed kites also inhabit herbaceous and open stages of most habitats in cismontane California. They forage in undisturbed, open grasslands, meadows, farmlands, and emergent wetlands; however, they will rarely dive into tall cover. They use a variety of tree species to perch and roost, preferring to place their nests near tops of dense oak, willow, or other tree stands. Nests are usually located near an open foraging area that supports dense vole populations.

Survey Results

There is suitable nesting and foraging habitat present within and adjacent to the BSA. There are large trees that line Dry Slough that provide suitable nesting habitat. Dryland grain crops within and adjacent to the BSA provide foraging habitat. There were no active white-tailed kite nests observed during the biological evaluation; however, based on the presence of suitable trees within the BSA, there is potential for future nest establishment. There are three (3) CNDDB occurrences indicating nesting within 5 miles of the BSA (#43, #44, #50). All of these occurrences were recorded in 1993. Occurrence #43 is located at the southern edge of the BSA.

Project Impacts

The project will permanently impact 0.044 acres of Valley Foothill Riparian SNC that could potentially serve as white-tailed kite nesting habitat as defined by the Yolo HCP/NCCP. The BSA contains white-tailed kite foraging habitat and nest trees, which triggers avoidance and minimization measures per the Yolo HCP/NCCP. There will be no impacts to white-tailed kite individuals with the implementation of avoidance and minimization measures.

Avoidance and Minimization Efforts for Swainson's Hawk and White-tailed Kite

The following are recommended avoidance and minimization measures for Swainson's hawk and white-tailed kite as specified by the Yolo HCP/NCCP:

AMM16, Minimize Take and Adverse Effects on Habitat of Swainson's Hawk and White-tailed Kite. The project proponent will retain a qualified biologist to conduct planning-level surveys and identify any nesting habitat present within 1,320 feet of the project footprint.

Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas.

If a construction project cannot avoid potential nest trees (as determined by the qualified biologist) by 1,320 feet, the project proponent will retain a qualified biologist to conduct preconstruction surveys for active nests consistent with guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000), between March 15 and August 30, within 15 days prior to the beginning of the construction activity. The results of the survey will be submitted to the Conservancy and CDFW. If active nests are found during preconstruction surveys, a 1,320-foot initial temporary nest disturbance buffer shall be established. If project related activities within the temporary nest disturbance buffer are determined to be necessary during the nesting season, then the qualified biologist will monitor the nest and will, along with the project proponent, consult with CDFW to determine the best course of action necessary to avoid nest abandonment or take of individuals. Work may be allowed only to proceed within the temporary nest disturbance buffer if Swainson's hawk or white-tailed kite are not exhibiting agitated behavior, such as defensive flights at intruders, getting up from a brooding position, or flying off the nest, and only with the agreement of CDFW and USFWS. The designated on-site biologist/monitor shall be on-site daily while construction-related activities are taking place within the 1,320-foot buffer and shall have the authority to stop work if raptors are exhibiting agitated behavior. Up to 20 Swainson's hawk nest trees (documented nesting within the last 5 years) may be removed during the permit term, but they must be removed when not occupied by Swainson's hawks.

For covered activities that involve pruning or removal of a potential Swainson's hawk or white-tailed kite nest tree, the project proponent will conduct preconstruction surveys that are consistent with the guidelines provided by the Swainson's Hawk Technical Advisory Committee (2000). If active nests are found during preconstruction surveys, no tree pruning or removal of the nest tree will occur during the period between March 1 and August 30 within 1,320 feet of an active nest, unless a qualified biologist determines that the young have fledged and the nest is no longer active.

Cumulative Impacts

There are no current or planned projects that will have cumulative effects on white-tailed kite or white-tailed kite habitat within the project BSA.

Compensatory Mitigation

Per the Yolo HCP/NCCP, there is 0.044 acres of Valley Foothill Riparian SNC that could potentially serve as white-tailed kite nesting habitat within the area of impact. Impacts to Valley Foothill Riparian SNC will be mitigated for in accordance with the Yolo HCP/NCCP (**Appendix E: Yolo HCP/NCCP Application Form 4**).

Western Yellow-billed Cuckoo

The western yellow-billed cuckoo is federally listed as threatened, State listed as endangered, and is a covered species under the Yolo HCP/NCCP. The western yellow-billed cuckoo is a medium-sized bird with a slender, long-tailed profile and a stout, slightly down-curved bill that is blue-black above and yellow on the base of the lower mandible. The western population occupies riparian woodlands along perennial rivers and streams at elevations below 6,600 feet. Cottonwood-willow galleries are most often inhabited; however, salt cedar, mesquite bosques, and other riparian tree communities may also be used. The species requires relatively large (at least 325 feet in width and 200 acres or more in extent) contiguous patches of multi-layered riparian habitat with dense understory foliage for nesting (79 FR 48548).

Survey Results

The BSA contains modeled habitat for western yellow-billed cuckoo according to the Yolo HCP/NCCP. There is one (1) CNDDB occurrence (#88) of western yellow-billed cuckoo at Putah Creek, 3.5 miles southeast of the BSA. This occurrence indicates historic observations from 1942, with a lack of observations "despite thorough coverage by field ornithologists" until 2012 (Gaines 1977 cited in CNDDB 2020). In 2012 a western yellow-billed cuckoo call was detected, and in 2013 a western yellow-billed cuckoo individual was seen and heard according to observation data. No nesting activity was observed or detected. Per the HCP/NCCP Covered Species Account for western yellow-billed cuckoo, there are no confirmed breeding records of this species in Yolo County.

There are no other recorded occurrences of western yellow-billed cuckoo within Putah Creek or Dry Slough, and there are no other CNDDB occurrences within 19 miles of the BSA. CNDDB occurrences within 25 miles (#95, #194) are occurrences associated with mature riparian habitat adjacent to the Sacramento River from the late 1800s, do not indicate nesting status, and are considered extirpated (CNDDB 2020).

Dry Slough does not contain contiguous suitable riparian habitat in the patch size required to support breeding cuckoos. The Western Yellow-Billed Cuckoo Modeled Habitat and Occurrences map included in the Covered Species Account of the HCP/NCCP indicates Dry Slough as containing suitable habitat; however, the riparian vegetation associated with Dry Slough in and near the project BSA does not meet the minimum

required habitat patch size to support breeding cuckoos (Halterman and Laymon 1989 cited in the Yolo HCP/NCCP). While it is not unlikely that western yellow-billed cuckoos may migrate through, forage within, or otherwise visit riparian areas associated with Putah Creek and Dry Slough, these riparian areas do not contain suitable habitat patch sizes of expansive stands of mature cottonwood-willow forests, dynamic riverine habitats, and dense understory vegetation that are required to support nesting activity.

Per the recommendations and requirements of the Yolo HCP/NCCP, qualified biologist Melissa Murphy conducted a planning level survey (PLS) of the modeled habitat for western yellow-billed cuckoo within the BSA. The purpose of the survey was to determine the presence of suitable habitat for western yellow-billed cuckoo.

Suitable habitat may be determined on a site-by-site basis by a qualified biologist. Results of the PLS indicate that the habitat in and within 500 feet of the BSA is unsuitable for breeding western yellow-billed cuckoos. Habitat consists of a narrow strip of riparian vegetation along Dry Slough with intensive agriculture on either side. Additionally, vehicle use on County Road 96, combined with disturbances from the adjacent residences, diminish habitat suitability for western yellow-billed cuckoos. Nesting cuckoos are very sensitive to human disturbance, especially during pair formation and the nest building stage, thus nest sites are rarely successful near areas with extensive human disturbance (Halterman 2001). The PLS was conducted on May 29, 2020. Due to the lack of suitable habitat for nesting in and within 500 feet of the BSA, a PLS for western yellow-billed cuckoo nests is not required.

Project Impacts

There will be no impacts to western yellow-billed cuckoo as a result of the project.

Avoidance and Minimization Efforts

As the BSA does not contain suitable western yellow-billed cuckoo nesting habitat, no AMMs are proposed.

Cumulative Impacts

There are no current or planned projects that will have cumulative effects western yellow-billed cuckoo within the project BSA.

Compensatory Mitigation

There will be no impacts to western yellow-billed cuckoo and no compensatory mitigation is proposed.

Tricolored Blackbird

Tricolored blackbirds are listed as threatened under the CESA, are also protected under the MBTA (16 USC §703) and CFGC §3503, and are a covered species under the Yolo HCP/NCCP. 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 within 1,300 feet of the BSA. There are blackberry brambles that line the banks of Dry Slough which provide suitable nesting habitat. In 1991, tricolored blackbirds were recorded nesting in the blackberry brambles along Dry Slough 2 miles northeast of the BSA (CNDDB Occurrence #404). Dryland grain crops that occur adjacent to the BSA may also provide nesting habitat. Dryland grain crops have become an alternative nesting location for large colonies of tricolored blackbirds as most of the species' natural nesting habitat has been converted into other land uses (CDFW 2018). Tricolored blackbirds often forage in agricultural fields, which occur adjacent to the BSA and are modeled as tricolored blackbird foraging habitat by the Yolo HCP/NCCP.

There is potential for tricolored blackbird to occur within the BSA due to the presence of suitable nesting habitat within and within 1,300 feet of the BSA, as well as the presence of suitable foraging habitat adjacent to the BSA.

Qualified biologist Melissa Murphy conducted a species-specific planning level survey for tricolored blackbird nests on May 29, 2020. No tricolored blackbirds, tricolored blackbird nests, or tricolored blackbird colonies were observed.

Project Impacts

Per the Yolo HCP/NCCP, the project will not impact land cover types designated as tricolored blackbird nesting and foraging habitat. The BSA contains and is within 1,300 feet of suitable tricolored blackbird nesting and foraging habitat, which triggers AMMs

per the Yolo HCP/NCCP. There will be no impacts to tricolored blackbird individuals with the implementation of AMMs.

Avoidance and Minimization Efforts

AMM21, Minimize Take and Adverse Effects on Habitat of Tricolored Blackbird. The project proponent will retain a qualified biologist to identify and quantify (in acres) tricolored blackbird nesting and foraging habitat (as defined in Yolo HCP/NCCP Appendix A, Covered Species Accounts) within 1,300 feet of the footprint of the covered activity. If a 1,300-foot buffer from nesting habitat cannot be maintained, the qualified biologist will check records maintained by the Conservancy (which will include CNDDB data, and data from the tricolored blackbird portal) to determine if tricolored blackbird nesting colonies have been active in or within 1,300 feet of the project footprint during the previous 5 years. If there are no records of nesting tricolored blackbirds on the site, the qualified biologist will conduct visual surveys to determine if an active colony is present, during the period from March 1 to July 30, consistent with protocol described by Kelsey (2008).

Operations and maintenance activities or other temporary activities that do not remove nesting habitat and occur outside the nesting season (March 1 to July 30) do not need to conduct planning or construction surveys or implement any additional avoidance measures.

If an active tricolored blackbird colony is present or has been present within the last five years within the planning-level survey area, the project proponent will design the project to avoid adverse effects within 1,300 feet of the colony site(s), unless a shorter distance is approved by the Conservancy, USFWS, and CDFW. If a shorter distance is approved, the project proponent will still maintain a 1,300-foot buffer around active nesting colonies during the nesting season but may apply the approved lesser distance outside the nesting season. Adjacent parcels under different land ownership will be surveyed only if access is granted or if the parcels are visible from authorized areas.

Cumulative Impacts

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

Compensatory Mitigation

With the implementation of AMMs, there will be no impacts to tricolored blackbird as a result of project activities and no compensatory mitigation is required.

Northern Harrier

The northern harrier (*Circus hudsonius*) is a SSC in the state of California. They range throughout California in low elevation areas such the Central Valley, desert and coastal regions. Northern harriers are dimorphic. Males have grey tones while females and juveniles display a rusty brown coloring. Suitable habitat for foraging and breeding include fresh water and coastal marshes, annual and perennial grasslands, pastures and low growing crops, sagebrush scrub and desert sinks. Northern harriers nest on the ground among tall grasses or shrubs. Current threats facing northern harriers include loss of foraging and nesting habitat, small mammal control, and human disturbances (Shuford and Gardali 2008).

Survey Results

There is suitable foraging and nesting habitat present within and adjacent to the BSA. There is one (1) CNDDB occurrence (#51) located approximately 5 miles east of the BSA, where a pair of northern harriers were observed nesting in a wheat field in 2015. There are no other CNDDB occurrences within 30 miles of the BSA.

Project Impacts

There will be no impacts to northern harrier with the implementation of avoidance and minimization measures.

Avoidance and Minimization Efforts

The following are recommended avoidance and minimization measures for northern harrier:

- Project activities and vegetation removal within the BSA shall be initiated outside of the bird nesting season (February 1 – August 31).
- If project activities and vegetation removal cannot be initiated outside of the bird nesting season than the following will occur:
    - A qualified biologist will conduct a pre-construction survey within 7 days prior to the initiation of project activities.
    - If an active northern harrier nest (i.e. with egg(s) or young) is observed within 250 feet of the BSA 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 and a report submitted to the lead agency weekly.

Cumulative Impacts

There are no current or planned projects that will have cumulative effects northern harrier within the project BSA.

Compensatory Mitigation

As there will be no impacts to northern harrier, no compensatory mitigation will be required.

Pallid Bat

Pallid bats (*Antrozous pallidus*) are designated as a CDFW SSC. Pallid bats roost alone, in small groups (2 to 20 bats), or gregariously (100s of individuals). Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of coast redwoods and giant sequoias, bole cavities of oaks, exfoliating Ponderosa pine and valley oak bark, deciduous trees in riparian areas, and fruit trees in orchards), and various human structures such as bridges (especially wooden and concrete girder designs), barns, porches, bat boxes, and human-occupied as well as vacant buildings. Roosts generally have unobstructed entrances/exits, and are high above the ground, warm, and inaccessible to terrestrial predators. However, this species has also been found roosting on or near the ground under burlap sacks, stone piles, rags, and baseboards. Lewis 1996 found that pallid bats have low roost fidelity and both pregnant and lactating pallid bats changed roosts an average of once every 1.4 days throughout the summer. Overwintering roosts have relatively cool, stable temperatures and are located in protected structures beneath the forest canopy or on the ground, out of direct sunlight. In other parts of the species' range, males and females have been found hibernating alone or in small groups, wedged deeply into narrow fissures in mines, caves, and buildings. At low latitudes, outdoor winter activity has been reported at temperatures between –5 and 10 °C (Western Bat Working Group 2020).

Survey Results

There is bachelor day-roosting habitat within tree crevices and peeling bark within the BSA, as well as in plugged drainage holes in the existing bridge over Dry Slough. During the May 29, 2020 field visit, Gallaway Enterprises' biologist found evidence of bats roosting in the existing Dry Slough bridge. The species of bats were not identified. There is one (1) CNDDB occurrence within 5 miles of the BSA (#312). This occurrence was recorded in 1964 in the City of Davis. The majority of bats are not recorded on the CNDDB due to low detectability and widespread abundance.

Project Impacts

There will be no impacts to pallid bat individuals with the implementation of avoidance and minimization measures.

Avoidance and Minimization Efforts

To minimize impacts to pallid bats protected by the CDFW and CFGC the following are recommended avoidance and minimization measures:

- Mature trees and existing bridge structure should be removed and/or fallen between September 16 – March 15 outside of the bat maternity season. Trees and existing bridge structure should be removed at dusk to minimize impacts to roosting bats.
- If tree and existing bridge structure removal cannot be performed outside of the maternity season a qualified biologist shall conduct a preconstruction survey of suitable roosting habitat within seven (7) days prior to construction activities.
    - If bats are found, consult with CDFW.
    - If no bats are found tree and existing bridge structure removal can proceed.

Cumulative Impacts

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

Compensatory Mitigation

As there will be no impacts to pallid bat, no compensatory mitigation will be required.

Migratory Birds and Raptors

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 (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

There is suitable nesting habitat within the BSA for migratory birds and raptors protected under the MBTA and CFGC. There are suitable trees, shrubs, and structures that offer nesting habitat for a variety of avian species.

There is potential for a variety of migratory birds and raptors to occur within the BSA due to the presence of suitable nesting habitat.

Project Impacts

There will be no impacts to migratory birds and raptors with the implementation of avoidance and minimization measures.

Avoidance and Minimization Efforts

The following are recommended avoidance and minimization measures for migratory birds and raptors:

- Project activities and vegetation removal within the BSA shall be initiated outside of the bird nesting season (February 1 – August 31).
- If project activities and vegetation removal cannot be initiated outside of the bird nesting season than the following will occur:
    - A qualified biologist will conduct a pre-construction survey within 7 days prior to the initiation of project activities.
    - If an active avian nest (i.e., with egg[s] or young) is observed within 250 feet of the BSA 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 and a report submitted to the lead agency weekly.

Cumulative Impacts

There are no current or planned projects that will have cumulative effects on migratory birds and raptors within the project BSA.

Compensatory Mitigation

As there will be no impacts to nesting migratory birds and raptors, no compensatory mitigation will be required.

Chapter 5 – Conclusions and Regulatory Determinations

Federal Endangered Species Act Consultation Summary

The USFWS and NMFS were consulted on May 28, 2020 for lists of endangered, threatened, sensitive, and rare species and their habitats with potential to occur within the BSA. The lists were later referenced to determine appropriate biological and botanical surveys and potential species occurrence.

Essential Fish Habitat Consultation Summary

As there are no drainages that could support anadromous fish species, there is no Essential Fish Habitat present within the BSA.

California Endangered Species Act Consultation Summary

The CDFW and CNPS were consulted on May 28, 2020 for lists of State endangered, threatened, sensitive, and rare species and their habitats with potential to occur within the BSA. The list was later referenced to determine appropriate biological and botanical surveys and potential species occurrence.

Wetlands and Other Waters Coordination Summary

A delineation of WOTUS was conducted by Gallaway Enterprises on May 29, 2020. The results of the delineation will be summarized in the *Draft Delineation of Waters of the United States* report, which will be submitted to the Corps as part of the permitting process (**Appendix D**).

There will be 0.023 acres of permanent impacts to Dry Slough, a jurisdictional perennial drainage (**Figure 6: Anticipated Impacts to Waters of the U.S.**). No wetlands will be impacted by the project. As there are 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 14 permit are necessary. 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 United State Department of Agricultural (USDA) Natural Resource Conservation Service (NRCS) and the California Invasive Plant Council (Cal-IPC). Within the BSA, ten (10) invasive plant species were observed that are included on the Cal-IPC invasive and noxious weed plant list as having a moderate or higher degree of invasiveness in California (**Table 2**).

Table 2. Invasive Plant Species Identified within the CR 96 Over Dry Slough Bridge Replacement BSA.

Scientific Name	Common Name	Cal-IPC Rating
Ailanthus altissima	Tree-of-heaven	Moderate
Arundo donax	Giant reed	High
Bromus diandrus	Rip-gut brome	Moderate
Cynodon dactylon	Bermuda grass	Moderate
Festuca perennis	Rye-grass	Moderate
Ficus carica	Wild fig	Moderate
Hordeum murinum	Wall hare barley	Moderate
Lepidium latifolium	Tall whitetop	High
Rubus armeniacus	Himalayan blackberry	High
Torilis arvensis	Hedge parsley	Moderate

It is recommended that general BMPs 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 general BMPs recommended by Cal-IPC:

- Provide prevention training to staff and contractors prior to starting work.
- Schedule activities to minimize potential for introduction and spread of invasive plants.
- Designate specific areas for cleaning tools, vehicles, equipment, clothing, and gear.
- Plan travel routes to avoid areas infested with invasive plants.
- Clean tools, equipment, vehicles, and animals 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.

Chapter 6 – References

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USFWS. 2002. Recovery Plan for the California Red-legged Frog (*Rana aurora draytonii*). U.S. Fish and Wildlife Service, Portland, Oregon.

USFWS. 2005. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon. Portland, Oregon. xxvi + 606 pages.

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Western Regional Climate Center, Desert Research Institute. 2020. http://www.wrcc.dri.edu. Local Climate Summary for the Davis 2 WSW Exp Farm, California (042294) NOAA Cooperative Station.

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Appendix A – Species Lists

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: December 16, 2020
Consultation Code: 08ESMF00-2021-SLI-0568
Event Code: 08ESMF00-2021-E-01568
Project Name: County Road 96 Over Dry Slough Bridge Replacement Project

Subject: 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: 08ESMF00-2021-SLI-0568

Event Code: 08ESMF00-2021-E-01568

Project Name: County Road 96 Over Dry Slough Bridge Replacement Project

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/38.56785851041474N121.84029957893446W

Counties: Yolo, CA

Endangered Species Act Species

There is a total of 8 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 Fisheries[1], 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
Yellow-billed Cuckoo *Coccyzus americanus* 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 *Thamnophis gigas* 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 *Rana draytonii*	Threatened

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

California Tiger Salamander *Ambystoma californiense*	Threatened

Population: U.S.A. (Central CA DPS)
There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/2076

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus*	Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/321

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus*	Threatened

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

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi*	Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/498

Vernal Pool Tadpole Shrimp *Lepidurus packardi*	Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/2246

Critical habitats

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

From: Samantha Morford
To: "nmfswcrca.specieslist@noaa.gov"
Subject: Bridge Replacement on County Road 98 Over Dry Slough
Date: Wednesday, August 05, 2020 8:57:00 AM

Quad Name **Merritt**

Quad Number **38121-E7**

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) -

ESA Anadromous Fish Critical Habitat

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

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 - **X**
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 -

Samantha Morford
Biologist
Gallaway Enterprises, Inc.
117 Meyers Street, Suite 120
Chico, CA 95928
(530) 332-9909 office
(530) 332-9905 fax
www.gallawayenterprises.com
A DBE certified business dedicated to exceptional client services.

Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Merritt (3812157))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
American badger *Taxidea taxus*	AMAJF04010	None	None	G5	S3	SSC
Antioch multilid wasp *Myrmosula pacifica*	IIHYM15010	None	None	GH	SH	
burrowing owl *Athene cunicularia*	ABNSB10010	None	None	G4	S3	SSC
California alkali grass *Puccinellia simplex*	PMPOA53110	None	None	G3	S2	1B.2
California tiger salamander *Ambystoma californiense*	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
Crotch bumble bee *Bombus crotchii*	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
Ferris' milk-vetch *Astragalus tener var. ferrisiae*	PDFAB0F8R3	None	None	G2T1	S1	1B.1
giant gartersnake *Thamnophis gigas*	ARADB36150	Threatened	Threatened	G2	S2	
heartscale *Atriplex cordulata var. cordulata*	PDCHE040B0	None	None	G3T2	S2	1B.2
hoary bat *Lasiurus cinereus*	AMACC05030	None	None	G5	S4	
Keck's checkerbloom *Sidalcea keckii*	PDMAL110D0	Endangered	None	G2	S2	1B.1
northern harrier *Circus hudsonius*	ABNKC11011	None	None	G5	S3	SSC
pallid bat *Antrozous pallidus*	AMACC10010	None	None	G5	S3	SSC
Sacramento Valley tiger beetle *Cicindela hirticollis abrupta*	IICOL02106	None	None	G5TH	SH	
silver-haired bat *Lasionycteris noctivagans*	AMACC02010	None	None	G5	S3S4	
Swainson's hawk *Buteo swainsoni*	ABNKC19070	None	Threatened	G5	S3	
tricolored blackbird *Agelaius tricolor*	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	IICOL48011	Threatened	None	G3T2	S3	
vernal pool fairy shrimp *Branchinecta lynchi*	ICBRA03030	Threatened	None	G3	S3	
vernal pool tadpole shrimp *Lepidurus packardi*	ICBRA10010	Endangered	None	G4	S3S4	

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
western bumble bee *Bombus occidentalis*	IIHYM24250	None	Candidate Endangered	G2G3	S1	
western pond turtle *Emys marmorata*	ARAAD02030	None	None	G3G4	S3	SSC
western spadefoot *Spea hammondii*	AAABF02020	None	None	G3	S3	SSC
western yellow-billed cuckoo *Coccyzus americanus occidentalis*	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
white-tailed kite *Elanus leucurus*	ABNKC06010	None	None	G5	S3S4	FP

Record Count: 25

CNPS California Native Plant Society

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

Plant List

1 matches found. *Click on scientific name for details*

Search Criteria

Found in Quad 3812157

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
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	1B.2	S2	G3

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 09 December 2020].

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Appendix B – Observed Species List

Plant Species Observed within the Dry Slough BSA on May 29, 2020	
Scientific Name	**Common Name**
Ailanthus altissima	Tree-of-heaven
Alcea sp.	Hollyhock
Amaranthus albus	Tumbleweed
Artemisia douglasiana	California mugwort
Arundo donax	Giant reed
Bromus diandrus	Rip-gut brome
Bromus hordeaceus	Soft chess
Bromus madritensis ssp. rubens	Red brome
Convulvulus arvensis	Bindweed
Cotinus coggygria	Common smokebush
Croton setiger	Turkey-mullein
Cynodon dactylon	Bermuda grass
Epilobium brachycarpum	Tall willowherb
Erigeron bonariensis	South American horseweed
Erodium botrys	Long-beaked stork's-bill
Erodium cicutarum	Cut-leaf filaree
Festuca perennis	Rye-grass
Ficus carica	Wild fig
Galium aparine	Bedstraw
Hordeum murinum	Wall hare barley
Juglans hindsii	Black walnut
Juglans regia	English walnut
Koelreuteria paniculata	Golden rain tree
Lactuca serriola	Prickly lettuce
Leontodon saxatilis	Hawkbit
Lepidium latifolium	Tall whitetop
Ligustrum lucidum	Privet
Malva neglecta	Common mallow
Malvella leprosa	Alkali mallow
Morus sp.	Mulberry
Nerium oleander	Oleander
Polygonum aviculare	Prostrate knotweed
Populus fremontii	Fremont's cottonwood
Proboscidea sp.	Common devil's claw
Quercus lobata	Valley oak
Rosa sp.	Rose
Rubus armeniacus	Himalayan blackberry
Rumex crispus	Curly dock
Salix exigua	Sandbar willow
Salsola sp.	Russian thistle
Senecio vulgaris	Old-man-in-the-Spring
Sequoia sempervirens	Coast redwood (planted)
Silybum marianum	Milk thistle

Scientific Name	**Common Name**
Sisymbrium officinale	Hedge mustard
Solanum americanum	Common nightshade
Sonchus asper	Sow thistle
Sorghum halepense	Johnsongrass
Torilis arvensis	Hedge parsley
Tragopogon sp.	Salsify
Tribulus terrestris	Puncture vine
Vitis sp	Grape

Appendix C – Project Site Photos

Taken May 29, 2020

Looking north at the Dry Slough Bridge on County Road 96.

Looking south at the Dry Slough Bridge on County Road 96.

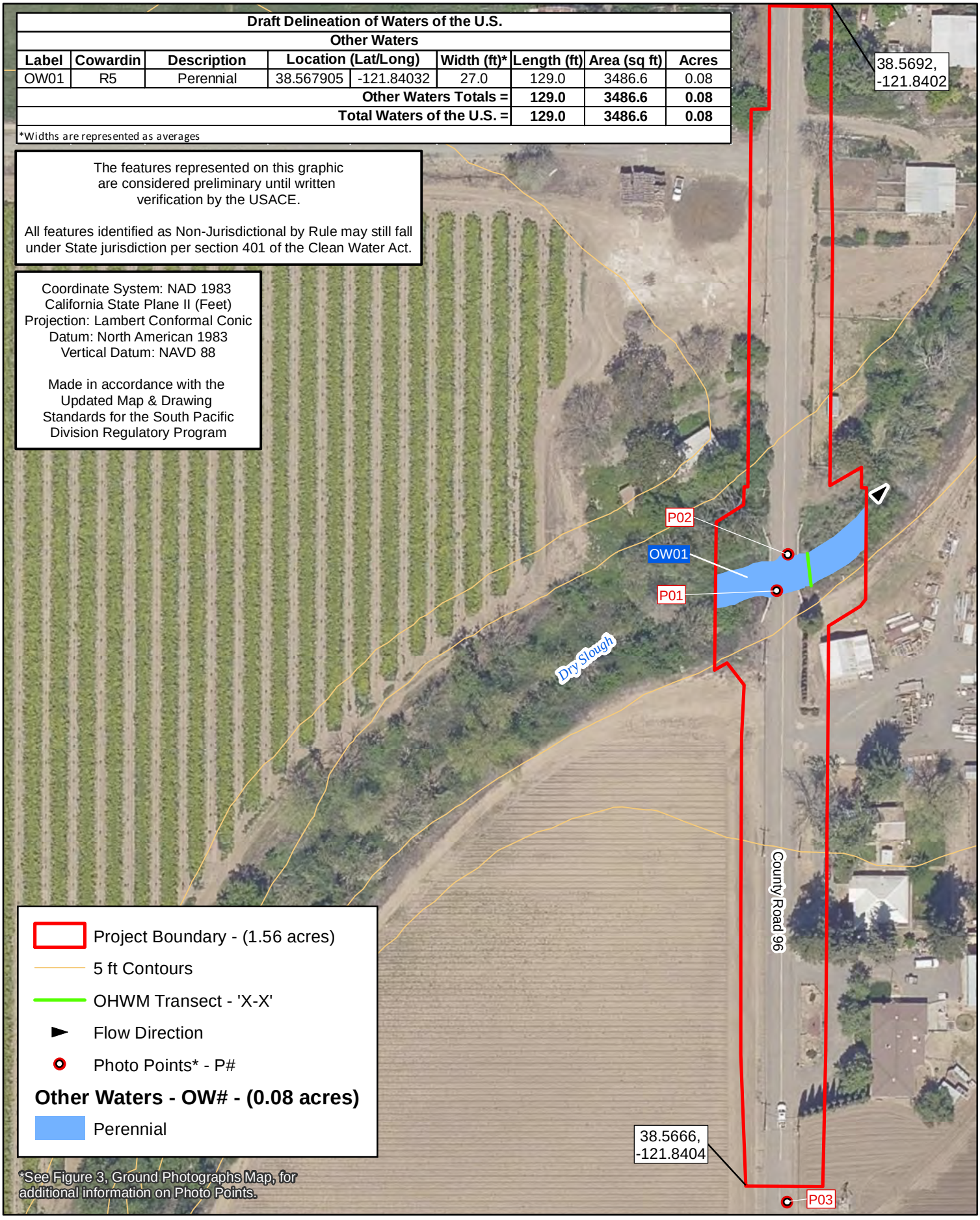
Overview of Dry Slough Bridge. Taken facing south.

On the Dry Slough Bridge, facing southwest.

Under the Dry Slough Bridge, facing west.

Underside of the Dry Slough Bridge, looking south.

Appendix D – Draft Delineation of Waters of the U.S. Map



County Road 96 Over Dry Slough
Draft Delineation of Waters of the U.S.
Figure 4

Delineation by: E. Gregg
Map by: B. Reaves

gallaway ENTERPRISES

GE: #17-013A Map Date: 12/15/20

Appendix E – Yolo HCP/NCCP Application Form 4

REPORTING FORM

PURPOSE

Complete this form to report coverage under the Yolo Habitat Conservation Plan/Natural Community Conservation Plan (Yolo HCP/NCCP) as a Permittee. Chapter 4 of the Permitting Guide, available on the Yolo Habitat Conservancy's ("Conservancy") web site under the "Permitting" tab, provides instructions for form completion. The form requirements are minimum requirements; the Conservancy may request more information to clarify or complete the form. Submittal of a preliminary reporting form to the Conservancy is encouraged to ensure timely and accurate completion. If an application fee is required (see Screening Form, Box Y), the Permittee should submit this fee to the Conservancy early in the application process. The Permitting Guide and additional resources are available on the Conservancy's web site under the "Permitting" tab. The Conservancy automatically adjusts mitigation fees on or around March 15th of each year to reflect current land prices and other expenses. If an applicant does not complete their application and issue payment prior to the fee update, the new fees will apply. The applicant may, however, pay mitigation fees early at the previous year's rate consistent with the Conservancy's Early Payment of Migitation Fees Policy.

Regional-scale data related land cover, sensitive natural communities, and covered species habitats in Yolo is made available through the Yolo HCP/NCCP GeoMapper online mapping tool. The GeoMapper tool is accessible via the Resources tab of the Yolo Habitat Conservancy website identified below, although it is intended for informational purposes only. All HCP/NCCP permit applicants must have site-specific planning level surveys by a qualified biologist to determine actual land cover and sensitive natural communities and species habitats in and around a project site to determine the correct amount of land cover mitigation fees and project specific Avoidance and Minimization Measures (AMMs).

https://www.yolohabitatconservancy.org/resources

BOX A: Preliminary/Final Application Form	
Check one box.	
☐ Preliminary Form (signature not required)	☐ Final Form (complete form and signature required)

BOX B: APPLICATION DETAILS	
1 Project name	County Road 96 over Dry Slough Bridge Replacement Project
2 Submittal date	
3 Member agency internal tracking number	Federal Project No. BRLO-5922 (104)
4 YHC internal tracking #	
5 Member agency	■ Yolo County ☐ City of Davis ☐ City of Woodland ☐ City of West Sacramento ☐ City of Winters

BOX C: MEMBER AGENCY CONTACT INFORMATION			
1 Member agency			
1.a Member agency name	Yolo County Community Services Department		
1.b Mailing address	292 W Beamer St, Woodland, CA 95695		
1.c Phone (home/office)	(530) 666-8775	1.d Phone (Cellular)	
1.e Email	lilia.razo@yolocounty.org		

BOX D: PROJECT INFORMATION		
1	Project address and location	County Road 96 (see attached map)
2	Assessor parcel number(s) APNs and acreage by parcel (not applicable for linear projects)	N/A
3	Total acreage of parcel(s) (not applicable for linear projects)	Project acreage: 1.56 acres
4	Using the GeoMapper's Spatially Defined Planning Unit Map, find your proposed project site. Check the Planning Unit in which your project lies.	**Yolo County Planning Units** ☐ 1 – Little Blue Ridge ☐ 2 – North Blue Ridge ☐ 3 – South Blue Ridge ☐ 4 – Capay Hills ☐ 5 – Dunnigan Hills ☐ 6 – Upper Cache Creek ☐ 7 – Lower Cache Creek ☐ 8 – Upper Putah Creek ☐ 9 – Lower Putah Creek ☐ 10 – Hungry Hollow Basin ☒ 11 – Willow Slough Basin ☐ 12 – Colusa Basin ☐ 13 – Colusa Basin Plains ☐ 14 – North Yolo Basin ☐ 15 – South Yolo Basin ☐ 16 – Yolo Basin Plains ☐ 17 – North Yolo Bypass ☐ 18 – South Yolo Bypass **Cities** ☐ 19 – City of Woodland ☐ 20 – City of Davis ☐ 21 – City of West Sacramento ☐ 22 – City of Winters

5 ☒ Provide a project description. Please refer to the Permitting Guide for details to include in the project description. Label as **Attachment 1** or indicate in this box the document name and page numbers of the report where this information can be found, and attach report or relevant excerpts**.**

6 ☒ Provide a legible vicinity map of the project site and surrounding area (PDF). Refer to the Permitting Guide for more information about details to include on the vicinity map. Label as **Attachment 2.** Rather than a separate PDF, applicant may include the site plan in the planning level survey report or other report.

If so, provide report name and page number here, and attach report or relevant excerpts**:**

7 ☒ Provide a site plan that shows the proposed project site and surrounding area. (PDF and CAD or GIS-compatible). Refer to the Permitting Guide (Page 7-2) for more information about details to include in the site plan. Label as **Attachment 3.** Rather than a separate PDF, applicant may include the site plan in the planning level survey report or other report. if so, provide report name and page number here, and attach report or relevant excerpt**:**

BOX E: NATURAL COMMUNITY AND LAND COVER IMPACTS AND MITIGATION FEES

Complete Items 1-26 below, referring to the Permitting Guide for calculation methods.

- Total fee amount for each land cover type will be auto-generated based on acreage amount (and for recurring temporary impacts, number of years out of the 50-year permit term the impact will occur).
- Temporary impact fee formula = land cover fee x area of temporary effect in acres x (F/50) where F = the number of years in which the activity will occur during the rest of the permit term (until 2069).
- Must include required land cover fee buffer area associated with the project. This is generally 10 feet for linear projects (e.g. roads, utility cooridors, pipelines) and 50 feet for all other projects. See Chapter 4 of the Permitting Guide under Box E instructions regarding the option of lumping land cover categories for the fee buffer calculations for linear projects.
- Fees will be updated annually, typically mid-March.
- Wetland fees are in addition to land cover fees.

Submit a planning-level survey, including a field-verified land cover map and the name and qualifications of the qualified biologist(s) responsible for preparation of the report. Label as **Attachment 4.** Mapped areas shown on the site plan (**Attachment 3** in Box D, Item 7) should be consistent with the acreages entered below. Include photographs of temporary impact areas. Label photos as **Attachment 5**.

Land Cover Types	Land Cover Permanently Impacted by Project (in acres)			Land Cover Temporarily Impacted by Project (in acres)	Years of Recurring Temporary Impact	Fees (Auto Generated)				
	Permanent Impact (acres)	Fee Buffer (acres)	TOTAL			Land Cover Fee (per acre)	Wetland Fee (per acre)	Permanent Impact, Land Cover Fee	Temporary Impact, Land Cover Fee	Wetland Fee
1 ☒ Developed (including ruderal with no covered species habitat)[a]	0.7	0.2	0.9	0.0	0	$0	$0	$ 0.00	$ 0.00	$ 0.00
2 ☐ Ruderal with covered species habitat[a]	0.0	0.0	0.0	0.0	0	$15,169	$0	$ 0.00	$ 0.00	$ 0.00
3 ☒ Barren, No Covered Species Habitat	0.0	0.0	0.0	0.0	0	$0	$0	$ 0.00	$ 0.00	$ 0.00
4 ☐ Barren, With Covered Species Habitat	0.0	0.0	0.0	0.0	0	$15,169	$0	$ 0.00	$ 0.00	$ 0.00
5 ☐ Vegetated Corridor with Covered Species Habitat	0.0	0.0	0.0	0.0	0	$15,169	$0	$ 0.00	$ 0.00	$ 0.00
6 ☐ Grassland (all types)	0.0	0.0	0.0	0.0	0	$15,169	$0	$ 0.00	$ 0.00	$ 0.00
7 ☐ Alkali Prairie	0.0	0.0	0.0	0.0	0	$15,169	$0	$ 0.00	$ 0.00	$ 0.00
8 ☐ Fresh Emergent Wetland (all types)	0.00	0.0	0.00	0.00	0	$15,169	$77,366	$ 0.00	$ 0.00	$ 0.00
9 ☒ Valley Foothill Riparian	0.04	0.03	0.08	0.00	0	$15,169	$85,683	$ 1,183.18	$ 0.00	$ 6,683.27

Land Cover Types	Land Cover Permanently Impacted by Project (in acres)			Land Cover Temporarily Impacted by Project (in acres)	Years of Recurring Temporary Impact	Fees (Auto Generated)				
	Permanent Impact (acres)	Fee Buffer (acres)	TOTAL			Land Cover Fee (per acre)	Wetland Fee (per acre)	Permanent Impact, Land Cover Fee	Temporary Impact, Land Cover Fee	Wetland Fee
10 ■ Lacustrine and Riverine	0.02	0.03	0.06	0.00	0	$15,169	$62,048	$ 864.63	$ 0.00	$ 3,536.74
11 ■ Cultivated Land (all types)	0.00	0.0	0.0	0.0	0	$15,169	$0	$ 60.68	$ 0.00	$ 0.00
12 ☐ Citrus/Subtropical	0.0	0.0	0.0	0.0	0	$15,169	$0	$ 0.00	$ 0.00	$ 0.00
13 ☐ Deciduous Fruits/Nuts	0.0	0.0	0.0	0.0	0	$15,169	$0	$ 0.00	$ 0.00	$ 0.00
14 ☐ Vineyards	0.0	0.0	0.0	0.0	0	$15,169	$0	$ 0.00	$ 0.00	$ 0.00
15 ☐ Turf Farm	0.0	0.0	0.0	0.0	0	$15,169	$0	$ 0.00	$ 0.00	$ 0.00
16 ☐ Flowers/Nursery/Tree Farms	0.0	0.0	0.0	0.0	0	$15,169	$0	$ 0.00	$ 0.00	$ 0.00
17 ■ Semiag/Incidental to Agriculture	0.1	0.2	0.3	0.0	0	$15,169	$0	$ 3,868.10	$ 0.00	$ 0.00
18 ☐ Eucalyptus	0.0	0.0	0.0	0.0	0	$15,169	$0	$ 0.00	$ 0.00	$ 0.00
19 ☐ Linear buffers (combine non-fee-paying land cover types)	N/A	0.0	0.0	N/A	N/A	$0	$0	$ 0.00	$ 0.00	$ 0.00
20 ☐ Linear buffers (combine fee-paying land cover types[b])	N/A	0.0	0.0	N/A	N/A	$15,169	$0	$ 0.00	$ 0.00	$ 0.00
TOTAL:	0.89	0.48	1.37				**TOTAL:**	$5,976.59	$ 0.00	$ 10,220.01
21							**TOTAL LAND COVER IMPACTS AND MITIGATION FEES**			$ 16,196.60
22							**APPLICATION FEE** (The application fee is credited towards the cost of the mitigation fees if the application fee is paid prior to the submittal of the mitigation fee payment . Application fee as of January 1, 2020: $1,981)			$ 0.00
23							**OTHER CREDITS** (Advanced fee payment or in lieu fee credit – must be verified by Conservancy). Add **Attachment 6**			$ 0.00
24							**TOTAL LAND COVER IMPACTS AND MITIGATION FEES DUE** (Mitigation fees due are determined at the time of payment unless they were paid in accordance with the Yolo HCP/NCCP Early Payment of Mitigation Fees Policy. See www.yolohabitatconservancy.org for current fee schedule.)			$ 16,196.60

[a] *Land cover fees may be applicable if covered species habitat is present.*

[b] *Fresh Emergent Wetland, Valley Foothill Riparian, and Lacustrine and Riverine land cover types cannot be lumped with other land cover types and must be entered in the fee buffer columns.*

BOX F: CONDITIONS OF APPROVAL: CONDUCT PLANNING LEVEL SURVEYS

Based on a planning level survey conducted by a qualified biologist using the land cover definitions described in the Permitting Guide in Table 2-1, indicate which sensitive natural communities and covered species are relevant to your project. Indicate below whether suitable covered species habitats are present (Column A) and, where applicable, if there is a need to conduct a pre-construction survey, a more focused survey(s) for covered species (Column B) to confirm presence. Complete species-specific planning level survey as needed consistent with protocols provided in Appendix A of the Permitting Guide. Alternatively, covered species presence can be assumed, which would requires adherence to applicable AMMs and implementation of avoidance measures or pre-construction surveys. Attach all species-specific planning level surveys as **Attachment 6**. Describe, map, and tabulate impacts the project will have on each natural community and each species for which habitat is present. Impact calculations must correspond to the permanent and temporary impact calculations in Box E. Label as **Attachment 7**. Alternatively, the impact assessment can be incorporated into the planning level survey. **Important**: Be aware of the timing requirements for conducting a species-specific planning-level survey (Table 6-1 in the Permitting Guide) to avoid project delays.

	A. Project Site Conditions Requiring Planning-Level Survey	B. Species-Specific Planning Level Survey Results	C. Documentation
Sensitive Natural Communities			
1 Alkali prairie and vernal pool complex	Are vernal pools or alkali seasonal wetlands present within 250 feet of project footprint? ☐ **Yes**. *Design project to avoid vernal pools or alkali seasonal wetlands by 250 feet or lesser buffer if approved by wildlife agencies. Check Box G, AMMs 9 and 10. Go to Column C.* ☒ **No**	N/A	Map attached? (Attachment 4 or 6?) ☐ **Yes** ☒ **No** If vernal pools or alkali seasonal wetlands are present on or near the site, provide map showing how project avoids these wetlands.
2 Valley foothill riparian	Is valley foothill riparian present within 100 feet of the project site boundary? ☒ **Yes**. *Design project to avoid valley foothill riparian by 100 feet or count all portions within 100 feet in the impact acreage (see Permitting Guide Table 2-1). Check Box G, AMMs 9 and 10. Go to Column C and provide map.* ☐ **No**	N/A	Map attached? (Attachment 4 or 6?) ☒ **Yes** ☐ **No** Provide map showing the valley foothill riparian in relation to the project footprint.
3 Lacustrine and riverine	Are any streams, rivers, lakes, or ponds within 25 feet of project footprint inside urban planning units, or within 100 feet of project footprint outside urban planning units? ☒ **Yes**. *Design project to avoid these resources by 25 feet inside urban planning units or 100 feet outside urban planning units, or count all portions within these distances in the impact acreage, unless a variance is allowed. Check Box G, AMMs 9 and 10. Go to Column C and provide map.* ☐ **No**	N/A	Map attached? (Attachment 4 or 6?) ☒ **Yes** ☐ **No** Provide map showing any streams, rivers, lakes, or ponds in relation to the project footprint.

BOX F: CONDITIONS OF APPROVAL: CONDUCT PLANNING LEVEL SURVEYS			
	A. Project Site Conditions Requiring Planning-Level Survey	B. Species-Specific Planning Level Survey Results	C. Documentation
Sensitive Natural Communities			
4 Fresh emergent wetlands	Are there any fresh emergent wetlands within 50 feet of project footprint outside urban planning units? ☐ **Yes**. *Design project to avoid these resources by 50 feet, or count all portions within 50 feet in the impact acreage. Check Box G, AMMs 9 and 10. Go to Column C and provide map).* ***Survey period: May 31–September 30*** ■ **No**	N/A	Map attached? (Attachment 4 or 6?) ☐ **Yes** ■ **No** Provide map of fresh emergent wetlands in relation to the project footprint.
Plants			
5 Palmate-bracted bird's beak	Is suitable habitat present within 250 feet of the project site boundary? ☐ **Yes**. *Survey for palmate-bracted bird's beak consistent with Permitting Guide Appendix A. Check Box G, AMM 11. Go to Column B.* ***Survey period: May 31–September 30*** ■ **No**	Is palmate-bracted bird's beak present? ☐ **Yes**. *Design project to avoid occupied habitat as described in AMM 11. Go to Column C.* ■ **No.** *Go to Column C.*	Species-Specific Planning-Level Survey attached? (Attachment 6) ☐ **Yes** ■ **No** *Include Species-Specific Planning-Level Survey and map of habitat and any plants found in relation to project footprint.*
Invertebrates			
6 Valley elderberry longhorn beetle	Is there presence of elderberry shrubs in the project site or within 100 feet outside of the project site boundary that could be impacted by the project? ☐ **Yes**. *Identify and map all elderberry shrubs in and within 100 feet of project footprint with stems greater than one inch in diameter at ground level. For mapped shrubs that cannot be avoided, quantify the number of stems greater than one inch in diameter at ground level, and identify any such stems with valley elderberry longhorn beetle exit holes. Check Box G, AMM 12. Go to Column C and provide survey report.* ***Survey period: Year-round*** ■ **No**	N/A	Species-Specific Planning-Level Survey attached? (Attachment 6) ☐ **Yes** ■ **No**

BOX F: CONDITIONS OF APPROVAL: CONDUCT PLANNING LEVEL SURVEYS

	A. Project Site Conditions Requiring Planning-Level Survey	B. Species-Specific Planning Level Survey Results	C. Documentation
Amphibians			
7 California tiger salamander	Is there presence of California tiger salamander aquatic or upland habitat in the project footprint, or aquatic habitat within 500 feet of the project footprint? ☐ **Yes**. *Check box G, AMM 13. Is the habitat within designated critical habitat for California tiger salamander, as determined using the GeoMapper?* ☐ **Yes**. Design project to avoid designated critical habitat. ☐ **No.** *If aquatic habitat cannot be avoided by 500 feet, either conduct surveys as described in the Permitting Guide Appendix A, or assume species presence.* ***Survey period: After rainfall, November 1 to May 15.*** *Go to Column B.* ■ **No**	Are California tiger salamanders present or assumed to be present in aquatic habitat? ☐ **Yes**. *If the species is present or assumed to be present, the Yolo HCP/NCCP will not allow any loss of occupied aquatic habitat until at least four new occupied breeding pools are discovered or established and protected in the Plan Area. Contact Yolo Habitat Conservancy. Go to Column C.* ■ **No**	Species-Specific Planning-Level Survey attached? (Attachment 6) ☐ **Yes** ■ **No**
Reptiles			
8 Western pond turtle	Is western pond turtle habitat present in the project footprint? ■ **Yes**. Check Box G, AMM 14. A qualified biologist is required to evaluate whether there is moderate to high likelihood of western pond turtle presence. *Go to Columns B and C.* ☐ **No**	Moderate to high likelihood of western pond turtle presence? ■ **Yes:** Check Box F for western pond turtle Pre-construction surveys. ☐ **No**	Habitat evaluation attached? (Attachment 6) ■ **Yes** ☐ **No**
9 Giant garter snake	Is there any giant garter snake habitat within the project footprint? ☐ **Yes**. *Design project to avoid or minimize impact on giant garter snake habitat to the extent practicable. If habitat cannot be avoided, see AMM 15. Check Box F for giant garter snake Pre-construction surveys, and check Box G, AMM 15.* ■ **No**	N/A	N/A

BOX F: CONDITIONS OF APPROVAL: CONDUCT PLANNING LEVEL SURVEYS			
	A. Project Site Conditions Requiring Planning-Level Survey	B. Species-Specific Planning Level Survey Results	C. Documentation
Birds			
10 Swainson's hawk and white-tailed kite	Are there suitable Swainson's hawk or white-tailed kite nest trees within 1,320 feet of the project footprint? ☒ **Yes**. *If nest trees cannot be avoided by 1,320 feet, check Box F for hawk and kite Pre-construction surveys, and Box G, AMM 16.* ☐ **No**	N/A	N/A
11 Western yellow-billed cuckoo	Is suitable habitat present within 500 feet of the project site boundary? ☐ **Yes**. *If there are breeding records for the western yellow-billed cuckoo within ¼ mile of the project site from the previous three years (as determined by GeoMapper), then assume species is present. If there are no breeding records with ¼ mile, then either assume species is present or survey consistent with Chapter 6 of the Permitting Guide. See columns B and C. Check Box F for western yellow-billed cuckoo Pre-construction surveys and Check Box G, AMM 17.* ***Survey period: June 1–August 30.*** ☒ **No**	Is western yellow-billed cuckoo present or assumed to be present? ☐ **Yes**. *If project cannot avoid occupied habitat by 500 feet, avoid take of nesting birds as described in AMM 17.* ☒ **No.**	Species-Specific Planning-Level Survey attached? (Attachment 6) ☐ **Yes** ☒ **No**
12 Western burrowing owl	Is western burrowing owl habitat present on the project site, or within 500 feet of the project site? ☐ **Yes**. *Conduct planning-level surveys for occupied habitat as described in Permitting Guide Appendix A. Go to Columns B and C.* ***Survey period: February 1–August 31 during the breeding season; September 1–January 31 during nonbreeding season.*** ☒ **No**	Are burrowing owls present? ☐ **Yes**. *Check Box G, AMM18. If burrows cannot be avoided, consistent with Permitting Guide Chapter 5, Check Box F for western burrowing owl Pre-construction surveys.* ☒ **No**	Species-Specific Planning-Level Survey attached? (Attachment 6) ☐ **Yes** ☒ **No**

BOX F: CONDITIONS OF APPROVAL: CONDUCT PLANNING LEVEL SURVEYS

	A. Project Site Conditions Requiring Planning-Level Survey	B. Species-Specific Planning Level Survey Results	C. Documentation
13 Least Bell's vireo	Is least Bell's vireo habitat present in and within 500 feet of project footprint? ☐ **Yes**. *Check Box G, AMM 19. Are there nesting records for the species within ¼ mile of the site from the previous three years (determined using the GeoMapper)?* ☐ **Yes**. *Assume species is present. See Column B.* ☐ **No.** *Conduct planning-level surveys, as described in Permitting Guide Appendix A. See Columns B and C.* ***Survey period: April 1–July 15*** ■ **No**	Are least Bell's vireo nests present or assumed to be present? ☐ **Yes**. *Check Box F for least Bell's vireo Pre-construction surveys. Avoid take of birds as described in AMM 19.* ■ **No.**	Species –Specific Planning-Level Survey attached? (Attachment 6) ☐ **Yes** ■ **No**
14 Bank swallow	Is bank swallow nesting habitat present on the project site, or within 500 feet of the project site? ☐ **Yes**. *Check Box G, AMM 20. Conduct planning-level surveys as described in Permitting Guide Appendix A. Go to Columns B and C.* ***Survey period: March 1–August 15*** ■ **No**	Are nesting bank swallows present? ☐ **Yes**. *Check Box F for bank swallow Pre-construction surveys. Avoid take of birds as described in AMM 19.* ■ **No.**	Species-Specific Planning-Level Survey attached? (Attachment 6) ☐ **Yes** ■ **No**
15 Tricolored blackbird	Is tricolored blackbird nesting habitat present on the project site, or within 1,300 feet of the project site? ■ **Yes**. *Conduct planning-level surveys as described in Permitting Guide Appendix A. Check Box G, AMM 21. Go to Column C.* ***Survey period: March 1–July 30*** ☐ **No**	N/A	Species-Specific Planning-Level Survey attached? (Attachment 6) ■ **Yes** ☐ **No**

BOX G: CONDITIONS OF APPROVAL: CONDUCT PRE-CONSTRUCTION SURVEYS

Indicate which species in **Items 1-7** are relevant to your project. **Important**: Refer to Chapter 4 of the Permitting Guide for information about survey purpose, the land cover types and site conditions requiring pre-construction surveys, survey area size, and survey timing.

Birds			
1	■ Swainson's hawk	4	☐ Western burrowing owl
2	■ White-tailed kite	5	☐ Least Bell's vireo
3	☐ Western yellow-billed cuckoo		
Reptiles			
6	☐ Giant garter snake	7	☐ Western pond turtle

BOX H: CONDITIONS OF APPROVAL: AVOIDANCE AND MINIMIZATION MEASURES (AMMs)

Check the avoidance and minimization measures below that apply to your project. Refer to the Permitting Guide for assistance. Describe how you will fulfill the requirements of each required condition. Plan your construction carefully around the translocation or other dates required by the AMMs. Label as **Attachment 8**.

1	■	AMM1: *Establish Resource Protection Buffers*
2	☐	AMM 2: *Design Developments to Minimize Indirect Effects at Urban-Habitat Interfaces (this AMM does not apply to new development where it is immediately adjacent to existing developed lands*)
3	■	AMM 3: *Confine and Delineate Work Area*
4	☐	AMM 4: *Cover Trenches and Holes during Construction and Maintenance*
5	☐	AMM 5: *Control Fugitive Dust*
6	■	AMM 6: *Conduct Worker Training*
7	☐	AMM 7: *Control Nighttime Lighting of Project Construction Sites*
8	☐	AMM 8: *Avoid and Minimize Effects of Construction Staging Areas and Temporary Work Areas*
9	■	AMM 9: *Establish Resource Protection Buffers around Sensitive Natural Communities*
10	☐	AMM 10: *Avoid and Minimize Effects on Wetlands and Waters*
11	☐	AMM 11: *Minimize Take and Adverse Effects on Palmate-Bracted Bird's Beak*
12	☐	AMM 12: *Minimize Take and Adverse Effects on Habitat of Valley Elderberry Longhorn Beetle*
13	☐	AMM 13: *Minimize Take and Adverse Effects on Habitat of California Tiger Salamander*
14	■	AMM 14: Minimize Take and Adverse Effects on Habitat of Western Pond Turtle
15	☐	AMM 15: *Minimize Take and Adverse Effects on Habitat of Giant Garter Snake*
16	■	AMM 16: *Minimize Take and Adverse Effects on Habitat of Swainson's Hawk and White-Tailed Kite*
17	☐	AMM 17: *Minimize Take and Adverse Effects on Habitat of Western Yellow-Billed Cuckoo*
18	☐	AMM 18: *Minimize Take and Adverse Effects on Western Burrowing Owl*
19	☐	AMM 19: *Minimize Take and Adverse Effects on Least Bell's Vireo*
20	☐	AMM 20: *Minimize Take and Adverse Effects on Habitat of Bank Swallow*
21	■	AMM 21: *Minimize Take and Adverse Effects on Habitat of Tricolored Blackbird*

BOX I: ATTACHMENT CHECKLIST

Indicate which attachments are provided below. **Note**: Attachments must meet the requirements described in Permitting Guide. If these requirements are not met, your application may be delayed.

All Projects

■ **Attachment 1**. Project Description (Box C). Attach separately or indicate attached report page #s here:
1

■ **Attachment 2**. Vicinity map PDF (Box C). Attach separately or indicate report page # here:
2 & 3

■ **Attachment 3**. Site Plan (Box C). Attach separately or indicate report page # here:
3 & 6

BOX I: ATTACHMENT CHECKLIST

Projects with Impacts

- ☒ **Attachment 4**. Planning level survey (Box D)
- ☐ **Attachment 5**. Photos of temporary impact areas. Attach separately or indicate report page #s here:
- ☒ **Attachment 6**. Species-specific planning level survey(s) (Box E). Attach separately or indicate report page #s here: 5 & 12-14
- ☒ **Attachment 7**. Unavoidable impacts on covered species. Attach separately or indicate report page #s here: 15, 23-33, 44
- ☒ **Attachment 8**. Description of compliance with Avoidance and Minimization Measures (Box G). Attach separately or indicate report page #s here: 25-28, 30-34, 38-42

BOX J: SIGNATURES

2 & 3 ☐ **By checking the box and signing below I certify all information in the application is true and correct to the best of my knowledge. I also certify I understand the requirements of the AMMs, including dates for elderberry translocation or other dates that may affect construction timing.**

1	Member agency contact name and contact information	Name			
		Phone		Email	
2	Member agency signature			Date	

FORM SUBMITTAL INSTRUCTIONS

Submit this form electronically to the Yolo Habitat Conservancy at the PO Box provided below. Provide a copy to the applicable planning office contact below, for informational purposes.

LOCAL AGENCY PLANNING OFFICE CONTACT INFORMATION

Yolo County	**City of West Sacramento**	**City of Davis**	**City of Woodland**	**City of Winters**
Stephanie Cormier Planning Division Department of Community Services 292 West Beamer Street, Woodland (530) 666-8041	David Tilley Community Development Department 1110 West Capitol Ave., 2nd Floor, West Sacramento (916) 617-4645	Sherri Metzker Community Development & Sustainability 23 Russell Blvd., Suite 2, Davis (530) 757-5610 ext. 7239	Cindy Norris Planning Division 300 First Street, Woodland (530) 661-5911	Dave Dowswell Community Development Department 318 First Street, Winters (530) 794-6714

YOLO HABITAT CONSERVANCY CONTACT INFORMATION

Address: PO Box 2202, Woodland, CA 95776 Phone: 530-666-8150 Email: info@yolohabitatconservancy.org