

# **DRAFT INITIAL STUDY WITH PROPOSED MITIGATED NEGATIVE DECLARATION**

## **RECLAMATION DISTRICT 817 GIBBS POND AND 40 MILE ROAD PIPE REPAIR PROJECT**



Prepared by



On behalf of Reclamation District 817

**December 2021**

## GENERAL INFORMATION ABOUT THIS DOCUMENT

### *What's in this document:*

The Reclamation District 817 has prepared this Initial Study, which examines the potential environmental impacts of the Gibbs Pond and 40 Mile Road Pipe Repair Project in Yuba County, California. The document explains the proposed project details and the existing environment that could be affected by the project, potential impacts, and proposed avoidance, minimization, and/or mitigation measures.

### *What you should do:*

- Please read the document. Hard copies of the document are available for review at:

Wheatland City Hall  
111 C Street, Wheatland, CA 95692

An electronic copy of the document is also available for review at: <http://www.wheatland.ca.gov/>

- Please submit your comments in writing no later than December 31, 2021 to:

Reclamation District 817  
ATTN: Thomas Engler  
P.O. Box 261, Wheatland, CA 95692.

You can also submit your comments via e-mail to [Engler@mbkengineers.com](mailto:Engler@mbkengineers.com)



## DRAFT PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

### ***Project Description***

Reclamation District (RD) 817 proposes to replace two gravity-flow pipes that provide storm drain and irrigation drainage through the northern levee of Dry Creek in Yuba County, California. The project is located where 40 Mile Road crosses the Dry Creek north levee approximately 2.75 miles east of State Route 70 and 3 miles west of the Town of Wheatland (Figure 1. Project Vicinity; Figure 2. Project Location). The Gibbs Pond and 40 Mile Road Pipe Repair Project (project) will be funded with a combination of local funds (provided by RD 817 through a grant agreement with Yuba Water Agency) and an existing project agreement between the RD and the California Department of Water Resources (DWR) under the Flood System Repair Program (FSRP).

Both pipes that this project intends to replace have failed and present flood risk to the residents of Wheatland. The inspection report for the pipe at 40 Mile Road indicates corrosion and voids in the pipe within the levee embankment. In addition, locations along the pipe have exposed fill. DWR has classified this pipe as “Urgent – Pipe Integrity Issue.” The inspection report for the pipe at Gibbs Pond indicates corrosion within the pipe and specifically at the outlet. Additionally, there is a section of pipe on the water side of the levee that is missing, which allows water to be able to flow backwards towards the landside of the levee. The pipe currently drains a much larger volume of water than originally intended. This pipe is also identified as “Urgent – Pipe Integrity Issue.”

### ***Determination***

This proposed Mitigate Negative Declaration is included to give notice to interested agencies and the public that it is RD 817’s intent to adopt a Mitigated Negative Declaration for this project. This does not mean that RD 817’s decision on the project is final. This Mitigated Negative Declaration is subject to changes based on comments received from interested agencies and the public.

RD 817 has prepared an Initial Study for this project and, pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

1. The project would have no impact on aesthetics, agriculture and forest resources, energy, land use and planning, mineral resources, population and housing, public services, recreation, transportation, and wildfire.
2. The project would have a less than significant impact on air quality, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, and utilities and service systems.
3. The project would have less than significant impact with mitigation on biological resources, and tribal cultural resources.

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Joe Conant  
President  
Reclamation District 817  
CEQA Lead Agency

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Date

## **EXECUTIVE SUMMARY**

Reclamation District (RD) 817 proposes to replace two gravity-flow pipes that provide storm drain and irrigation drainage through the northern levee of Dry Creek in Yuba County, California. The project is located where 40 Mile Road crosses the Dry Creek north levee approximately 2.75 miles east of State Route (SR) 70 and 3 miles west of the Town of Wheatland.

Both pipes that this project intends to replace have failed. The inspection report for the pipe at 40 Mile Road indicates voids in the pipe within the levee embankment where the fill around the pipe is exposed. DWR has classified this pipe as “Urgent – Pipe Integrity Issue.” The inspection report for the pipe at Gibbs Pond indicates corrosion within the pipe and specifically at the outlet. Additionally, there is a section of pipe on the water side of the levee that is missing, which allows water to be able to flow backwards towards the landside of the levee. The pipe currently drains a much larger volume of water than originally intended. This pipe is also identified as “Urgent – Pipe Integrity Issue.”

The following improvements are proposed for the pipe at 40 Mile Road:

- The existing 18-inch diameter corrugated metal pipe (CMP) would be abandoned in place. This pipe currently crosses under both 40 Mile Road and the Dry Creek levee. The intake is located north of the levee and west of 40 Mile Road and the outfall is located south of the levee and east of 40 Mile Road. The existing pipe would be capped/plugged at both ends and filled with low pressure flowable grout until the pipe has been completely filled, preventing water from draining through the pipe after construction is completed.
- A new 18-inch diameter welded steel pipe would be constructed under the Dry Creek levee on a different alignment as the existing pipe. The new pipe would have a similar intake location but would run roughly parallel to 40 Mile Road with the outfall proposed to be located south of the levee and west of 40 Mile Road. The new pipe would allow gravity flow drainage and would include a flap gate which can be closed to prevent irrigation waters from draining during the irrigation season. The flap gate will not allow flows during high water through the pipe to inundate the landside of the Dry Creek levee.
- Construction of the new 18-inch pipe would be accomplished by de-grading the existing levee section to the proposed pipe profile, installing the new pipe, then backfilling and compacting with original levee material and clean import fill from off-site. A designated degrade stockpile area would be located directed adjacent to grading activities. Import fill is expected to be needed due to volume loss associated with compaction. Import fill type will be assessed in field to ensure soil compatibility (to avoid a seepage block condition) within the embankment.
- Grading between the new pipe outfall and the bank of Dry Creek would occur to provide channelization for the drainage flow to prevent erosion.

The following improvements are proposed for the pipe at Gibbs Pond:

- The existing 24-inch diameter CMP and associated gate structures will be removed and replaced within the existing project footprint with a new 24-inch diameter welded steel pipe. The new pipe would allow gravity flow drainage and would include a flap gate which can be closed to prevent irrigation waters from draining during the irrigation season. The flap gate will not allow flows during high water through the pipe to inundate the landside of the Dry Creek levee.
- Removal of the old pipe and construction of the new 24-inch pipe would be accomplished by de-grading the existing levee section to the proposed pipe profile, installing the new pipe, concrete

gate well, sluice gate, associated inlet and outlet headwalls, flap gates, and then backfilling and compacting with original levee material and clean import fill from off-site. A designated degrade stockpile area would be located approximately 600-feet east of the degrade area directly adjacent to the project. Import fill is expected to be needed due to volume loss associated with compaction. Import fill type will be assessed in field to ensure soil compatibility (to avoid a seepage block condition) within the embankment.

The project would be accessed via a designated access/haul route along the levee crown Hoffman-Plumas Road. The project is not expected to require permanent acquisition of any property; however, construction easements will be needed from adjacent property owners and an encroachment permit will be obtained from the Central Valley Flood Protection Board for construction activities that will occur within the floodplain. Construction staging would occur on adjacent private property or on top of the Dry Creek Levee.

The measures to reduce potential effects to less than significant levels are summarized below. The detailed California Environmental Quality Act (CEQA) checklist with discussion and findings of project impacts on each resource is in Section 2 of this Initial Study.

<b>Summary of Potential Impacts, Best Management Practices (BMPs) and Mitigation Measures</b>		
<b>Resource</b>	<b>Project Impacts</b>	<b>Summary of BMPs and/or Mitigation Measures</b>
Aesthetics	No Impact	N/A
Agriculture and Forest Resources	No Impact	N/A
Air Quality	Less than Significant Impact	Dust control BMPs, Fugitive Dust Control Plan
Biological Resources	Less than Significant Impact with Mitigation	Standard erosion control BMPs, environmental awareness trainings, ESA fencing; pre-construction nesting bird and Swainson's hawk surveys; post construction BMPs.
Cultural Resources	Less than Significant Impact	N/A
Energy	No Impact	N/A
Geology and Soils	Less than Significant Impact	Standard erosion control BMPs and preparation of SWPPP
Greenhouse Gas Emissions	Less than significant impact	N/A
Hazards and Hazardous Materials	Less than Significant Impact	Standard BMPs; preparation of a Spill Prevention, Control, and Countermeasure Plan
Hydrology and Water Quality	Less than Significant Impact	Standard erosion control BMPs, NPDES compliance, and preparation of SWPPP
Land Use and Planning	No Impact	N/A
Mineral Resources	No Impact	N/A
Noise	Less than Significant Impact	N/A
Population and Housing	No Impact	N/A
Public Services	No Impact	N/A
Recreation	No Impact	N/A
Transportation/ Traffic	No Impact	N/A

Summary of Potential Impacts, Best Management Practices (BMPs) and Mitigation Measures		
Resource	Project Impacts	Summary of BMPs and/or Mitigation Measures
Tribal Cultural Resources	Less than Significant Impact with Mitigation	Cultural awareness trainings, cultural resources monitoring, and compliance with state/federal regulations on unexpected discovery of cultural resources or human remains.
Utilities and Service Systems	Less than Significant Impact	N/A
Wildfire	No Impact	N/A
Mandatory Findings of Significance	Less than Significant	N/A

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## **List of Abbreviations**

APE	Area of Potential Effects
BMPs	Best Management Practices
BSA	Biological Study Area
CAA	Clean Air Act
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CWA	Clean Water Act
ESA	Environmentally Sensitive Area
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
GHG	Greenhouse Gases
MBTA	Migratory Bird Treaty Act
MND	Mitigated Negative Declaration
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCC	Natomas Cross Canal
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resource Conservation Service
OHP	Office of Historic Preservation
PM	Particulate Matter

RWQCB	Regional Water Quality Control Board
SHPO	State Historic Preservation Office
SHTAC	Swainson's Hawk Technical Advisory Committee
SIP	State Implementation Plan
SPCCP	Spill Prevention, Control, and Countermeasure Program
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service

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## **1.0 Introduction**

### **1.1 Project Background**

Reclamation District (RD) 817 proposes to replace two gravity-flow pipes that provide storm drain and irrigation drainage through the northern levee of Dry Creek in Yuba County, California. The project is located where 40 Mile Road crosses the Dry Creek north levee approximately 2.75 miles east of State Route 70 and 3 miles west of the Town of Wheatland (Figure 1. Project Vicinity; Figure 2. Project Location). The Gibbs Pond and 40 Mile Road Pipe Repair Project (project) will be funded with a combination of local funds (provided by RD 817 through a grant agreement with Yuba Water Agency) and an existing project agreement between the RD and the California Department of Water Resources (DWR) under the Flood System Repair Program (FSRP).

Both pipes that this project intends to replace have failed and present flood risk to the residents of Wheatland. The inspection report for the pipe at 40 Mile Road indicates corrosion and voids in the pipe within the levee embankment. In addition, locations along the pipe have exposed fill. DWR has classified this pipe as “Urgent – Pipe Integrity Issue.” The inspection report for the pipe at Gibbs Pond indicates corrosion within the pipe and specifically at the outlet. Additionally, there is a section of pipe on the water side of the levee that is missing, which allows water to be able to flow backwards towards the landside of the levee. The pipe currently drains a much larger volume of water than originally intended. This pipe is also identified as “Urgent – Pipe Integrity Issue.”

### **1.2 Purpose**

The purpose of the project is to re-establish and maintain interior drainage for irrigation and stormwater runoff by replacing the failed pipes located at Gibbs Pond and 40 Mile Road to prevent further levee embankment voids, pipe corrosion, backflow issues, and control water volume losses.

### **1.3 Need**

The project is needed to maintain adequate drainage of irrigation and stormwater flows that occur on the adjacent parcels north of the Dry Creek north levee.

### **1.4 Alternatives**

The project includes one Build Alternative and one No-Build Alternative.

#### **1.4.1 Build Alternative**

The Build Alternative would consist of the following improvements for the pipe at 40 Mile Road:

- The existing 18-inch diameter corrugated metal pipe (CMP) would be abandoned in place. This pipe currently crosses under both 40 Mile Road and the Dry Creek levee. The intake is located north of the levee and west of 40 Mile Road and the outfall is located south of the levee and east of 40 Mile Road. The existing pipe would be capped/plugged at both ends and filled with low pressure flowable grout until the pipe has been completely filled, preventing water from draining through the pipe after construction is completed.

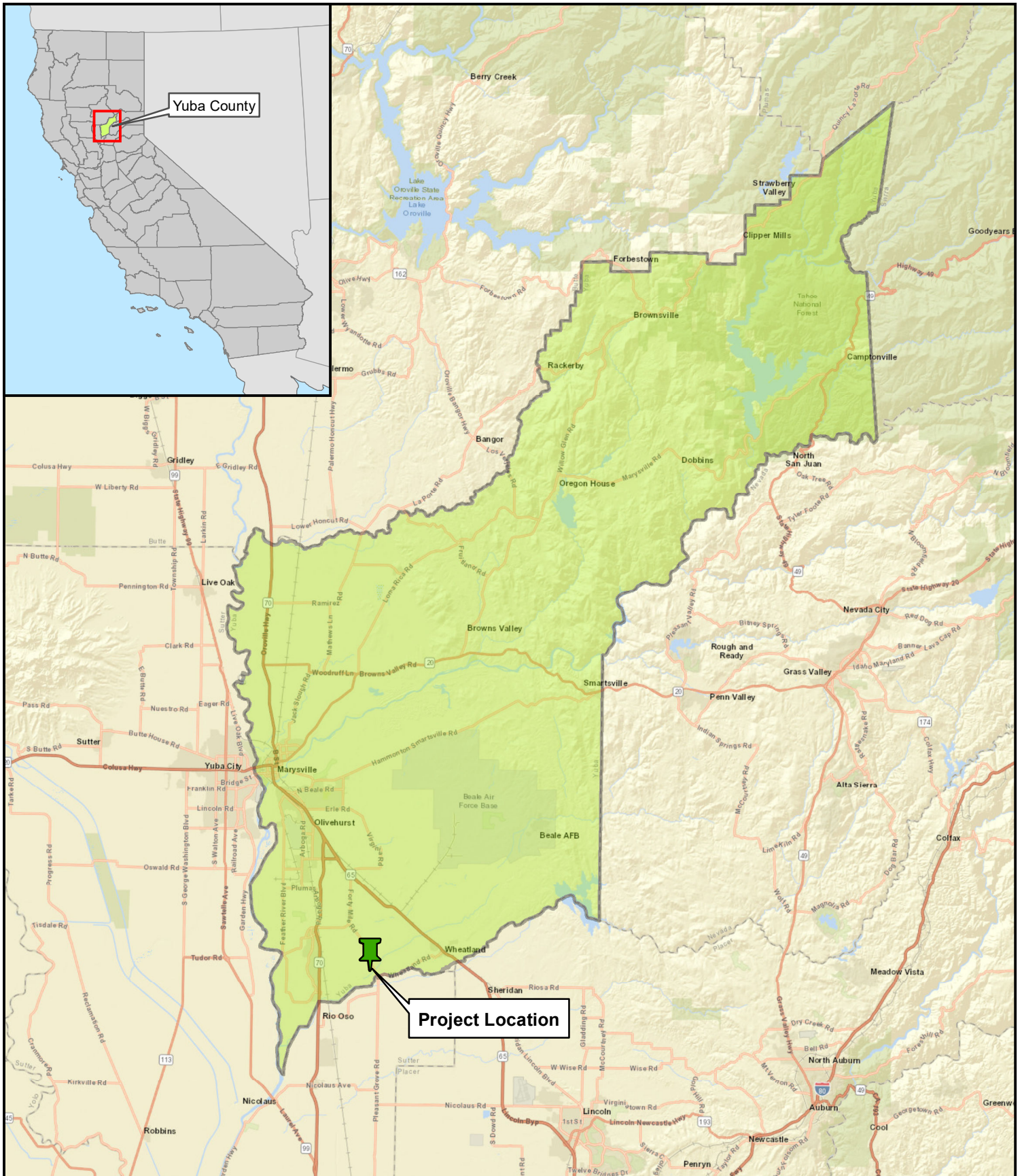
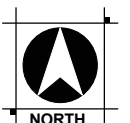
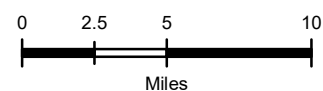


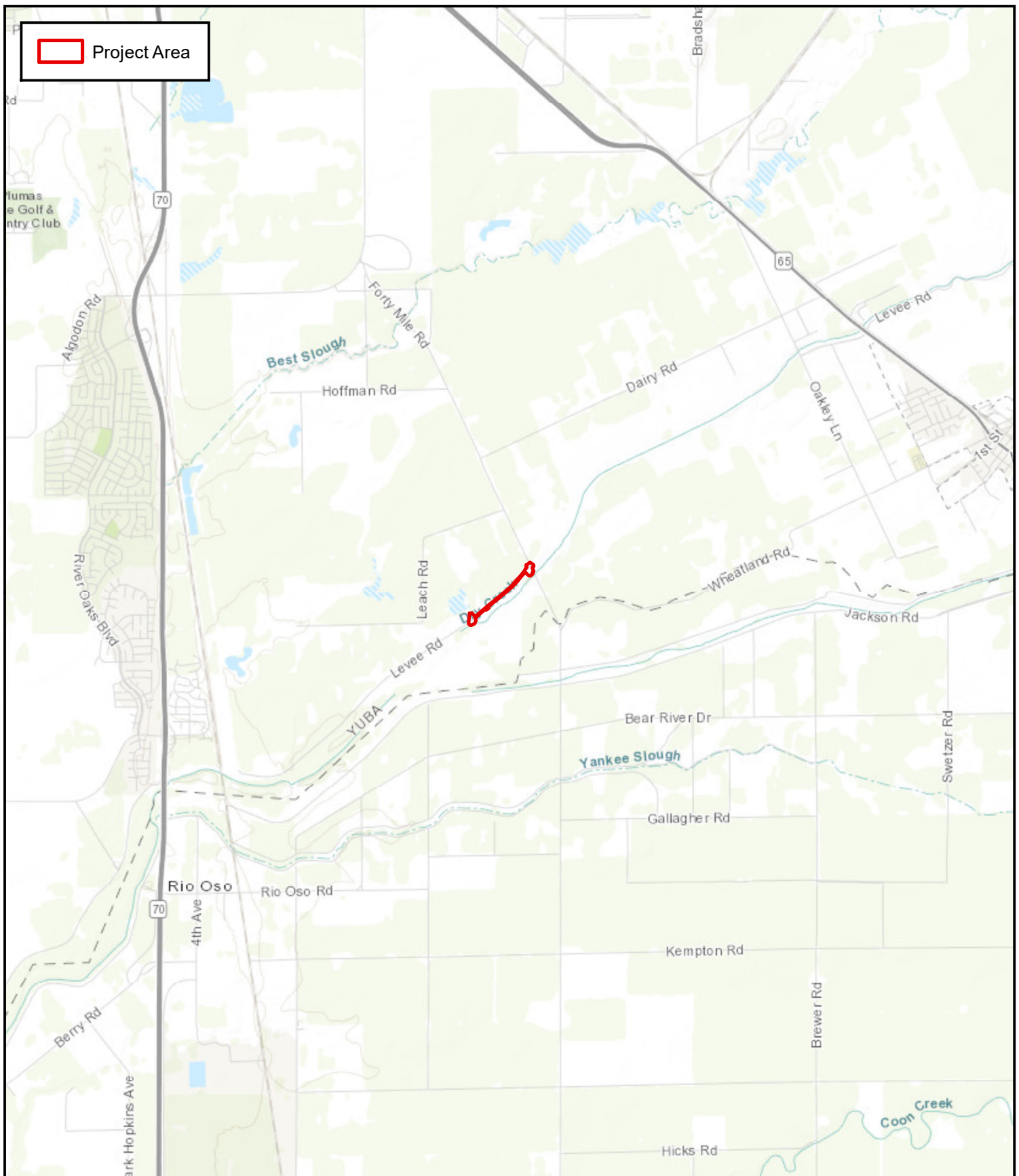
FIGURE 1

## PROJECT VICINITY

GIBBS POND AND 40 MILE ROAD PIPE REPAIR PROJECT  
YUBA COUNTY, CALIFORNIA  
SEPTEMBER 2021







**FIGURE 2**

**PROJECT LOCATION**

GIBBS POND AND 40 MILE ROAD PIPE REPAIR PROJECT  
YUBA COUNTY, CALIFORNIA  
SEPTEMBER 2021



- A new 18-inch diameter welded steel pipe would be constructed under the Dry Creek levee on a different alignment as the existing pipe. The new pipe would have a similar intake location but would run roughly parallel to 40 Mile Road with the outfall proposed to be located south of the levee and west of 40 Mile Road. The new pipe would allow gravity flow drainage and would include a flap gate which can be closed to prevent irrigation waters from draining during the irrigation season. The flap gate will not allow flows during high water through the pipe to inundate the landside of the Dry Creek levee.
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- The existing 24-inch diameter CMP and associated gate structures will be removed and replaced within the existing project footprint with a new 24-inch diameter welded steel pipe. The new pipe would allow gravity flow drainage and would include a flap gate which can be closed to prevent irrigation waters from draining during the irrigation season. The flap gate will not allow flows during high water through the pipe to inundate the landside of the Dry Creek levee.
- Removal of the old pipe and construction of the new 24-inch pipe would be accomplished by de-grading the existing levee section to the proposed pipe profile, installing the new pipe, concrete gate well, sluice gate, associated inlet and outlet headwalls, flap gates, and then backfilling and compacting with original levee material and clean import fill from off-site. A designated degrade stockpile area would be located approximately 600-feet east of the degrade area directly adjacent to the project. Import fill is expected to be needed due to volume loss associated with compaction. Import fill type will be assessed in field to ensure soil compatibility (to avoid a seepage block condition) within the embankment.

The project would be accessed via a designated access/haul route along the levee crown Hoffman-Plumas Road. The project is not expected to require permanent acquisition of any property; however, construction easements will be needed from adjacent property owners and an encroachment permit will be obtained from the Central Valley Flood Protection Board for construction activities that will occur within the floodplain. Construction staging would occur on adjacent private property or on top of the Dry Creek Levee (Figure 3. Project Features).

#### **1.4.2 No-Build Alternative**

The No-Build Alternative would not repair the pipe failures at Gibbs Pond and 40 Mile Road. This alternative would not replace the failed pipes classified as “Urgent – Pipe Integrity Issue” by the DWR and would allow further levee embankment voids, pipe corrosion, backflow issues, and uncontrolled water volume losses.



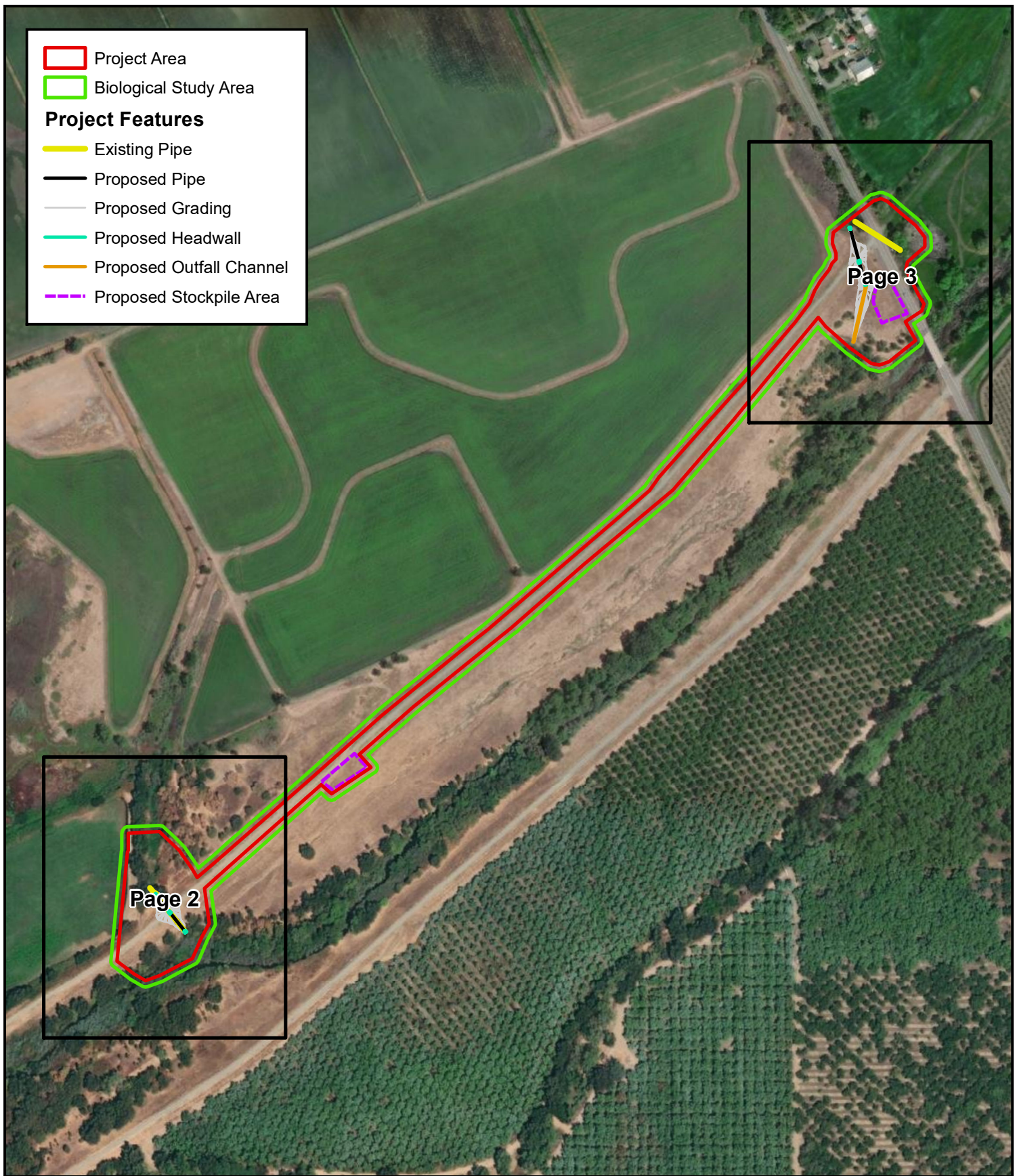
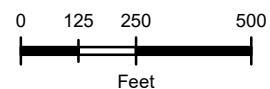


FIGURE 3

**PROJECT FEATURES**

**PAGE 1 OF 3**

GIBBS ROAD PIPE REPAIR PROJECT  
YUBA COUNTY, CALIFORNIA  
AUGUST 2021





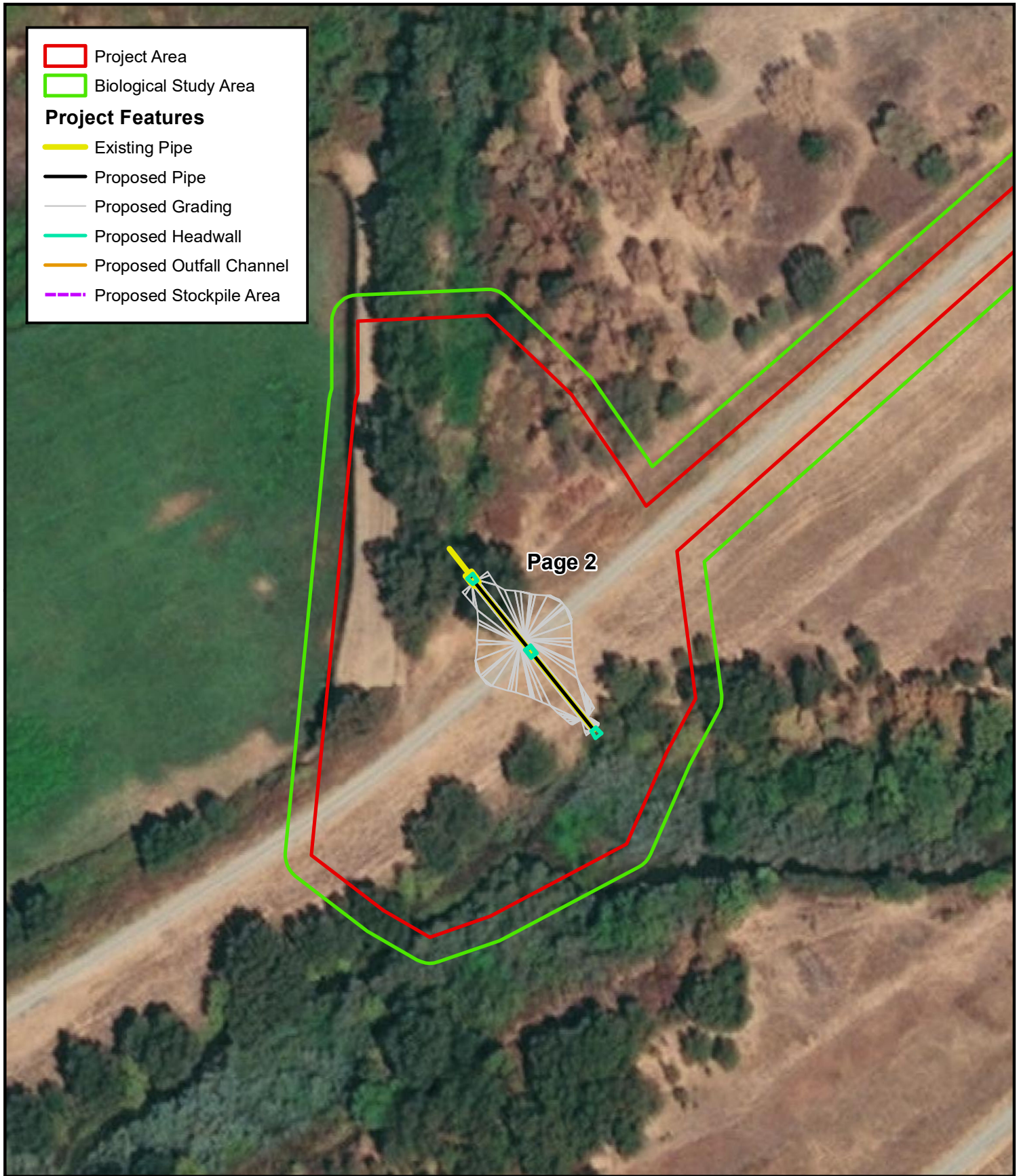
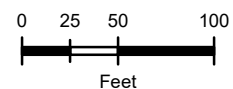


FIGURE 3

**PROJECT FEATURES**

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GIBBS ROAD PIPE REPAIR PROJECT  
YUBA COUNTY, CALIFORNIA  
AUGUST 2021





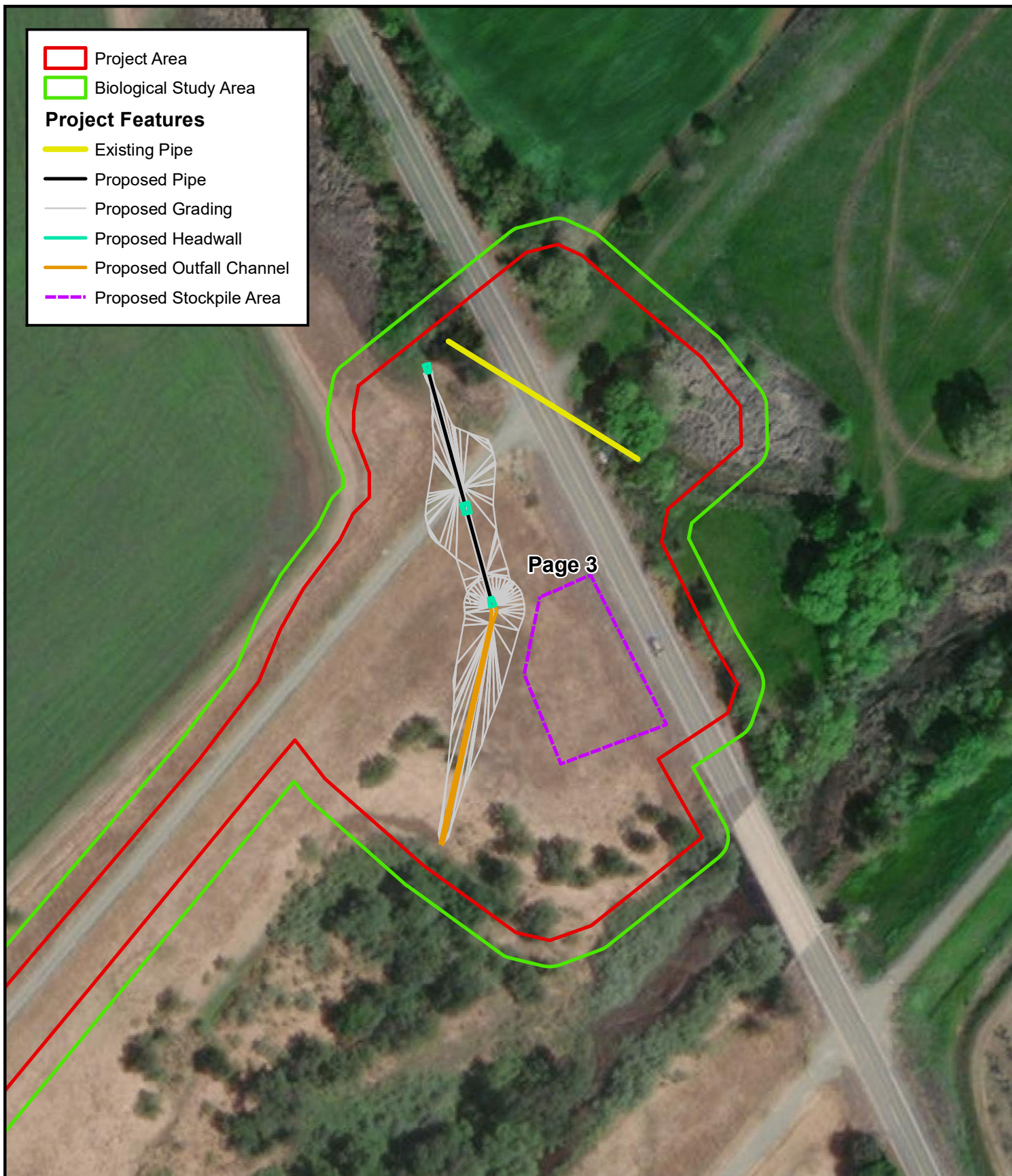
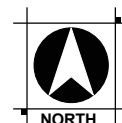
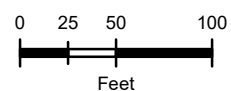


FIGURE 3

**PROJECT FEATURES**

**PAGE 3 OF 3**

GIBBS ROAD PIPE REPAIR PROJECT  
YUBA COUNTY, CALIFORNIA  
AUGUST 2021



  
WOOD RODGERS



## 1.5 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications are required for project construction:

**Table 1: Permit and Approvals Needed**

<b>Agency</b>	<b>Permit/Approval</b>	<b>Status</b>
California Department of Fish and Wildlife (CDFW)	Section 1600 Streambed Alteration Agreement	To be obtained during Final Design
Central Valley Regional Water Quality Control Board (RWQCB)	Section 401 Water Quality Certification	To be obtained during Final Design
U.S. Army Corps of Engineers (USACE)	Section 404 Nationwide Permit Authorization	To be obtained during Final Design
U.S. Army Corps of Engineers (USACE)	Section 408 Levee Modification	To be obtained during Final Design
Central Valley Flood Protection Board (CVFPB)	Encroachment Permit	To be obtained during Final Design
State Regional Water Quality Control Board	National Pollution Discharge Elimination System (NPDES) Construction General Permit	To be obtained prior to the start of construction

## 2.0 CEQA Initial Study Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. Potential impact determinations include Potentially Significant Impact, Less Than Significant with Mitigation, Less Than Significant Impact, and No Impact. In many cases, background studies performed in connection with a project will indicate that there are no impacts to a particular resource. A No Impact answer reflects this determination. The questions in this checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

### 2.1 AESTHETICS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### DISCUSSION

a) *Would the project have a substantial adverse effect on a scenic vista?*

**No impact.** No designated scenic vistas are located within or near to the project site.

b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

**No impact.** The project would not impact any scenic resources.

c) *Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings?*

**No Impact.** The project would not degrade the existing visual character due to the nature and location of the project.

d) *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

**No Impact.** The project would not create any new sources of light or glare.

### FINDINGS

The project would not adversely affect any designated scenic resource or vista nor substantially change the current visual environment. The project would have **No Impact** relating to aesthetics.

## 2.2 AGRICULTURE AND FOREST RESOURCES

Would the project:

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
--------------------------------	---------------------------------------	------------------------------	-----------

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources (including timberland) are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment project and the Forest Legacy Assessment project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

a) Convert Prime Farmland, Unique Farmland, or Farmland of State-wide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### AFFECTED ENVIRONMENT

The land use zoning within the project area is designated by Yuba County as AE-80 – Exclusive Agricultural District 80 Acres (Yuba County 2015). According to the California Department of Conservation (CDC), Division of Land Resource Protection (DLRP), Farmland Mapping and Monitoring Program (FMMP), Yuba County Important Farmland Map 2018, the project area falls within an area designated as “Other Land”, These areas are defined as other land not included in any other FMMP mapping category, such as vacant and nonagricultural land.

### DISCUSSION

- a) *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*

**No Impact.** According to the CDC California Important Farmland Finder (CDC 2021a), the project does not occur within lands that are designated as Prime, Unique or Farmland of Statewide Importance. Additionally, the project is anticipated to require temporary construction easements, but will not require permanent acquisition of any property. As a result, no conversion of farmland use is anticipated. The project area would continue to be zoned as AE-80, and no impact would occur.

- b) *Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?*

**No Impact.** Based on a review of the Yuba County 2030 General Plan (Natural Resources Element) and CDC FMMP (CDC 2021b), there are no farmland resources or Williamson Act contract lands within the

project area. Therefore, the proposed project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impact would occur.

- c) *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?*

**No Impact.** There is no forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)) within the project area. Therefore, the project would have no conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production, and no impact would occur.

- d) *Would the project result in the loss of forest land or conversion of forest land to non-forest use?*

**No Impact.** There is no forest land or forest resources located within the project area; therefore, the project would not result in the loss of forest land or conversion of forest land to non-forest use, and there would be no impact.

- e) *Would the project involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?*

**No Impact.** The project would not involve changes in the existing environment that, due to their location or nature, could result in the conversion of farmland or forest land to non-agricultural use or non-forest use. Therefore, the project would have no effects to farmland or forest land resources, and no impact would occur.

## ***FINDINGS***

The project does not occur within lands that are designated as Prime Farmland, Unique Farmland, Farmland of Statewide Importance, forest land, or timberland. The project is anticipated to require temporary construction easements; however, no permanent acquisition of any property is anticipated. As a result, the project would not directly or indirectly cause the conversion of farmland, forestland, or timberland. The project would have **No Impact** relating to agricultural and forest resources.

## 2.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### ***REGULATORY SETTING***

#### ***Federal Regulations***

The Clean Air Act (CAA) as amended in 1990 is the federal law that governs air quality. Its counterpart in California is the California Clean Air Act of 1988. These laws set standards for the quantity of pollutants that can be in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). Standards have been established for six criteria pollutants that have been linked to potential health concerns; the criteria pollutants are: carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), particulate matter (PM), lead (Pb), and sulfur dioxide (SO<sub>2</sub>).

#### ***State Regulations***

Responsibility for achieving California's air quality standards, which are more stringent than federal standards, is placed on the California Air Resources Board (CARB) and local air districts and is to be achieved through district-level air quality management plans that will be incorporated into the State Implementation Plan (SIP). In California, the U.S. Environmental Protection Agency (U.S. EPA) has delegated authority to prepare SIPs to the CARB, which, in turn, has delegated that authority to individual air districts.

The CARB has traditionally established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving state implementation plans.

Responsibilities of air districts include overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA.

### ***AFFECTED ENVIRONMENT***

The project, located within Yuba County, is in the Sacramento Valley Air Basin and is subject to the Feather River Air Quality Management District (FRAQMD) requirements and regulations.

### ***DISCUSSION***

- a) *Would the project conflict with or obstruct implementation of the applicable air quality plan?*



**No Impact.** The project is consistent with the site land use and zoning. Construction of the project would not conflict with or obstruct implementation of any air quality plan.

- b) *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

**Less than Significant Impact.** The CARB is required to designate areas of the state as attainment, non-attainment, or unclassified for any state standard. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “non-attainment” designation indicates that a pollutant concentration violated the standard at least once within a calendar year. The area air quality attainment status of Yuba County is shown below on Table 2.

**Table 2: NAAQS and CAAQS Attainment Status for Yuba County**

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – 8-Hour	Unclassified/Attainment	Non-Attainment
PM <sub>10</sub>	Unclassified/Attainment	Non-attainment
PM <sub>2.5</sub>	Unclassified/Attainment	Attainment
Carbon Monoxide	Unclassified/Attainment	Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Sulfates	No Federal Standard	Attainment
Lead	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility Reducing Particles	No Federal Standard	Unclassified
Sources: CARB 2018		

### **Operational Emissions**

Operation of the replaced/repared pipes at Gibbs Pond and 40 Mile Road would not result in operational emissions. Therefore, no impact relating to air quality would occur due to operation of the completed project.

### **Construction Emissions**

Construction activities associated with the project would result in temporary incremental increases in air pollutants, such as ozone precursors and particulate matter due to operation of gas-powered equipment and earth-moving activities. According to the FRAQMD CEQA Guidelines, projects with construction-generated emissions are distinguished as two types of projects: Type 1 and Type 2. The proposed project would fall within the Type 2 category, as a project with no land use component, no operational phase, and the construction phase emissions being the only emissions generated by the project. With Type 2 projects, significance thresholds are based solely on the construction phase emissions. FRAQMD recommends that a Roadway Construction Emissions Model (RCEM) be used to calculate emissions levels from project construction for Type 2 projects. A Type 2 project is considered to be a less than significant impact if the average project emissions do not exceed 25 lbs/day of nitrogen oxide (NO<sub>x</sub>) or reactive organic gases (ROG) and daily emissions of 80 lbs/day of PM<sub>10</sub>. If the project exceeds the designated thresholds, the project would be required to implement the FRAQMD *Best Available Mitigation Measures for Construction Phase* measures and any other mitigation to reduce the impact below the significance thresholds.

A RCEM Version 9.0.0 was completed for the project (Appendix A. RCEM Results). The RCEM determined that project construction emissions would be well below FRAQMD thresholds of significance, and construction phase mitigation measures would not be required.

Although the project's construction phase emissions would not require additional mitigation measures to reduce project emissions to a less than significant level, the FRAQMD requires every project to submit an Authority to Construct Permit, to implement standard construction BMPs for all projects within the district, and to include the submittal of a Fugitive Dust Control Plan (FDCP). The following are FRAQMD standard construction BMPs as recommended, and where applicable:

1. Implement the Fugitive Dust Control Plan.
2. Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0, Visible Emissions limitations (40 percent opacity or Ringleman 2.0).
3. The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained prior to and for the duration of onsite operation.
4. Limiting idling time to 5 minutes – saves fuel and reduces emissions.
5. Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.
6. Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas within a shuttle service. Schedule operations affecting traffic to off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.
7. Portable engines and portable engine-driven equipment units used at the project work site, with exception of on-road and off-road motor vehicles, may require California Air Resources Board (CARB) Portable Equipment Registration with the State or a local district permit. The owner/operator shall be responsible for arranging appropriate consultations with the CARB or the district to determine registration and permitting requirements prior to equipment operation at the site.

All construction activities would follow FRAQMD rules and regulations and would implement all appropriate air quality BMPs. Impacts related to construction emissions would be considered less than significant, and implementation of an approved FDCP and standard construction BMPs would further minimize the potential for construction related air quality impacts.

*c) Would the project expose sensitive receptors to substantial pollutant concentrations?*

**Less than Significant Impact.** The nearest sensitive receptor to the project is located approximately 600 feet northeast of the project area. However, the proposed project would not generate any substantial pollutant concentrations and, with the implementation of BMPs, temporary incremental increases of air pollutants would be minimized and reduced in accordance with FRAQMD rules and regulations. Therefore, the project would not expose sensitive receptors to substantial pollutant concentrations and the project would have a less than significant effect.

*d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

**Less than Significant Impact.** Short-term air quality impacts may occur due to the release of particulate emissions (airborne dust and combustion) generated by construction activities; however, the project would not result in other emissions (such as those leading to odors), and with the implementation of BMPs, temporary incremental increases in air pollutants would be minimized and reduced in accordance with

FRAQMD rules and regulations. Therefore, the project would not result in other emissions adversely affecting a substantial number of people, and the project would have a less than significant impact.

### ***BEST MANAGEMENT PRACTICES***

**AQ-1:** Prior to construction, the project proponent or project contractor shall obtain an approved FRAQMD Authority to Construct Permit, an approved fugitive dust control plan, and shall implement applicable FRAQMD BMPs.

1. Implement the Fugitive Dust Control Plan.
2. Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0, Visible Emissions limitations (40 percent opacity or Ringleman 2.0).
3. The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained prior to and for the duration of onsite operation.
4. Limiting idling time to 5 minutes – saves fuel and reduces emissions.
5. Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.
6. Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas within a shuttle service. Schedule operations affecting traffic to off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.
7. Portable engines and portable engine-driven equipment units used at the project work site, with exception of on-road and off-road motor vehicles, may require California Air Resources Board (CARB) Portable Equipment Registration with the State or a local district permit. The owner/operator shall be responsible for arranging appropriate consultations with the CARB or the district to determine registration and permitting requirements prior to equipment operation at the site.

### ***FINDINGS***

The project would not cause operational long-term air quality impacts; however, the project would cause temporary incremental emissions from construction. With the implementation of FDCP, the project would comply with all federal, state, and FRAQMD standards, and would result in a **Less than Significant Impact** relating to air quality.

## 2.4 BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game U.S. Fish and Wildlife Service, or NOAA Fisheries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***REGULATORY SETTING***

This section describes the federal, state, and local plans, policies, and laws that are relevant to biological resources within the Biological Study Area (BSA). Applicable federal permits and approvals that will be required before construction of the project are provided in Section 1.5.

#### **Federal Regulations**

##### **Federal Endangered Species Act**

The Federal Endangered Species Act (FESA) of 1973 (16 U.S.C. section 1531 et seq.) provides for the conservation of endangered and threatened species listed pursuant to Section 4 of the Act (16 U.S.C. section 1533) and the ecosystems upon which they depend. These species and resources have been identified by United States Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS).

##### **Clean Water Act**

The Clean Water Act (CWA) was enacted as an amendment to the Federal Water Pollutant Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the United States (WoUS). The CWA serves as the primary federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The CWA empowers the U.S. EPA to set national water quality standards and effluent limitations and includes programs addressing both point-source and non-point-source pollution. Point-source pollution originates or enters surface waters at a single, discrete location, such as an outfall structure or an excavation or construction site. Non-point-source pollution originates over a broader area and includes urban contaminants in storm water runoff and sediment loading from upstream areas. The CWA operates on the principle that all discharges into the nation's waters are unlawful unless they are specifically authorized by a permit; permit review is CWA's primary regulatory tool.

The United States Army Corps of Engineers (USACE) regulates discharges of dredged or fill material into WoUS. These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a direct or indirect connection to interstate commerce. USACE regulatory jurisdiction pursuant to Section 404 of the CWA is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or may be indirect (through a nexus identified in USACE regulations).

The Regional Water Quality Control Board (RWQCB) has jurisdiction under Section 401 of the CWA and regulates any activity which may result in a discharge to surface waters. Typically, the areas subject to jurisdiction of the RWQCB coincide with those of USACE (i.e., WoUS, including any wetlands). The RWQCB also asserts authority over “waters of the state” (WoS) under waste discharge requirements pursuant to the Porter-Cologne Water Quality Control Act.

### **State Regulations**

#### **California Environmental Quality Act**

The California Environmental Quality Act (CEQA) is a state law created to inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities and to work to reduce these negative environmental impacts. The Reclamation District 1001 is the CEQA lead agency for this project.

#### **California Endangered Species Act**

The California Endangered Species Act (CESA) (California Fish and Game (CFG) Code Section 2050 et seq.) requires the California Department of Fish and Wildlife (CDFW) to establish a list of endangered and threatened species (Section 2070) and to prohibit the incidental taking of any such listed species except as allowed by the Act (Sections 2080-2089). In addition, CESA prohibits take of candidate species (under consideration for listing).

The CESA also requires the CDFW to comply with CEQA (Pub. Resources Code Section 21000 et seq.) when evaluating incidental take permit applications (CFG Code Section 2081(b) and California Code Regulations, Title 14, section 783.0 et seq.), and the potential impacts that the project or activity for which the application was submitted may have on the environment. The CDFW’s CEQA obligations include consultation with other public agencies that have jurisdiction over the project or activity [California Code Regulations, Title 14, Section 783.5(d)(3)]. The CDFW cannot issue an incidental take permit if issuance would jeopardize the continued existence of the species [CFG Code Section 2081(c); California Code Regulations, Title 14, Section 783.4(b)].

#### **Section 1602: Streambed Alteration Agreement**

Under CFG Code 1602, public agencies are required to notify CDFW before undertaking any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occur during the environmental process. When an existing fish or wildlife resource could be substantially adversely affected, CDFW is required to propose reasonable project changes to protect the resources. These modifications are formalized in a Streambed Alteration Agreement that becomes part of the plans, specifications, and bid documents for the project.

#### **Section 3503 and 3503.5: Bird and Raptors**

CFG Code Section 3503 prohibits the destruction of bird nests and Section 3503.5 prohibits the killing of raptor species and destruction of raptor nests. Trees and shrubs are present in and adjacent to the study area and could contain nesting sites.

**Section 3513: Migratory Birds**

CFG Code Section 3513 prohibits the take or possession of any migratory non-game bird as designated in the Migratory Bird Treaty Act (MBTA) or any part of such migratory non-game bird except as provided by the rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

***AFFECTED ENVIRONMENT***

This section describes the natural resources present within and immediately surrounding within the project BSA and includes a discussion of the special-status species and sensitive habitats potentially occurring in the project area, an analysis of the impacts that could occur to biological resources due to implementation of the proposed project, and appropriate mitigation measures to reduce or avoid significant impacts. The analysis of biological resources presented in this section is based on a review of the current project description, the Biological Resources Report (BRR; see Appendix B), and Aquatic Resources Delineation Report (ARDR; see Appendix B) prepared for the project by Dokken Engineering (Dokken Engineering 2021a; Dokken Engineering 2021b).

The BSA is within the Sacramento Valley bioregion of the Great Central Valley region of the California Floristic Province (Jepson 2021). This bioregion is predominately agricultural, with grasslands, marshes, vernal pools, riparian woodlands, alkali sink vegetation, and valley oak woodlands throughout. It has slightly cooler, wetter conditions than its southern counterpart, the San Joaquin Valley. Weather conditions include warm, dry summers and cool, wet winters. The average annual high temperature of the region is 76 degrees Fahrenheit, with summer highs reaching on average 96 degrees Fahrenheit. The average annual low is 49 degrees Fahrenheit. Winters reach average temperatures as low as 38 degrees Fahrenheit, with an average annual precipitation of approximately 22 inches in the form of rain (U.S. Climate Data 2021).

The project BSA was defined as the area necessary for all project activities, plus an additional 20-foot buffer to accommodate for staging and access and any potential changes to project design. The BSA is approximately 12.03 acres in area.

***Physical Conditions*****Topography**

The natural topography of the BSA is relatively flat, with the exception of human-built roads that are constructed on raised levees for flood safety and control purposes. The elevation of the BSA ranges from approximately 55 to 70 feet above mean sea level. Topographical features within and immediately adjacent to the BSA include Dry Creek, Hoffman Plumas Road, and 40 Mile Road.

**Soils**

Soils within the BSA are variable, consisting of sandy, loamy soils that are poorly- to well-drained. According to the Natural Resources Conservation Service (NRCS), the specific soil types within the BSA are as follows:

- Columbia fine sandy loam, 0 to 1 percent slopes, frequently flooded.
- San Joaquin loam, 0 to 1 percent slopes; and
- San Joaquin loam, 0 to 1 percent slopes, occasionally flossed.

In addition, the NRCS reports that 5.2% of the BSA is covered by water and a soil type is not reported for this area (NRCS 2021).

## **Biological Conditions**

The BSA is composed of a mixture of natural vegetation communities, aquatic features, and developed lands. Land cover and vegetation communities within the BSA area designated as: annual grassland, riparian, remnant oak woodland, ruderal, stream channel, seasonal wetland, urban/barren, and agricultural (**Figure 4. Vegetation Communities**).

### **Natural Vegetation Communities**

#### **Annual Grassland**

Annual grassland habitat is composed of a variety of annual grass species, the majority of which are non-native and invasive. Such species observed within the BSA include foxtail barley (*Hordeum murinum*), Italian ryegrass (*Festuca perennis*), ripgut brome (*Bromus diandrus*), and soft chess (*Bromus hordeaceus*). In addition to grasses, this habitat type supports numerous forbs such as Ithuriel's spear (*Triteleia laxa*), hawkbit (*Leontodon saxatilis*), Italian thistle (*Carduus pycnocephalus*), and field bindweed (*Convolvulus arvensis*).

#### **Riparian**

Riparian habitat occurs within the entire BSA along the edges of Dry Creek and adjacent to the unnamed drainage channel located at the Gibbs Pond site. Riparian vegetation within the BSA is characterized as a denser, mesic set of trees, shrubs, and forbs associated with a nearby aquatic resource. Within this habitat, plant species such as narrow leaf willow (*Salix exigua*), poison oak (*Toxicodendron diversilobum*), and curly dock (*Rumex crispus*) can be found. Riparian vegetation is an important habitat component, as it supports a wide diversity of plant and wildlife species and acts as a key part of habitat connectivity and migratory corridors.

#### **Remnant Oak Woodland**

At both the Gibbs Pond and 40 Mile Road pipeline sites, there are small patches of remnant oak woodland habitat. This habitat type is recognizable by a canopy of valley oak (*Quercus lobata*) and interior live oak (*Q. wislizeni*) and an understory with shrubby species such as Himalayan blackberry (*Rubus armeniacus*). Within the BSA, oak woodland is marginal and disturbed, likely remnants from the oak woodlands that would have dominated the landscape prior to the area's agricultural development.

#### **Ruderal**

Ruderal vegetation occurs within the BSA along the edges of 40 Mile Road where weedy grasses and forbs occur in between the margins of developed and natural habitat types. Such species include blessed milk thistle (*Silybum marianum*), Italian thistle, and cutleaf geranium (*Geranium dissectum*).

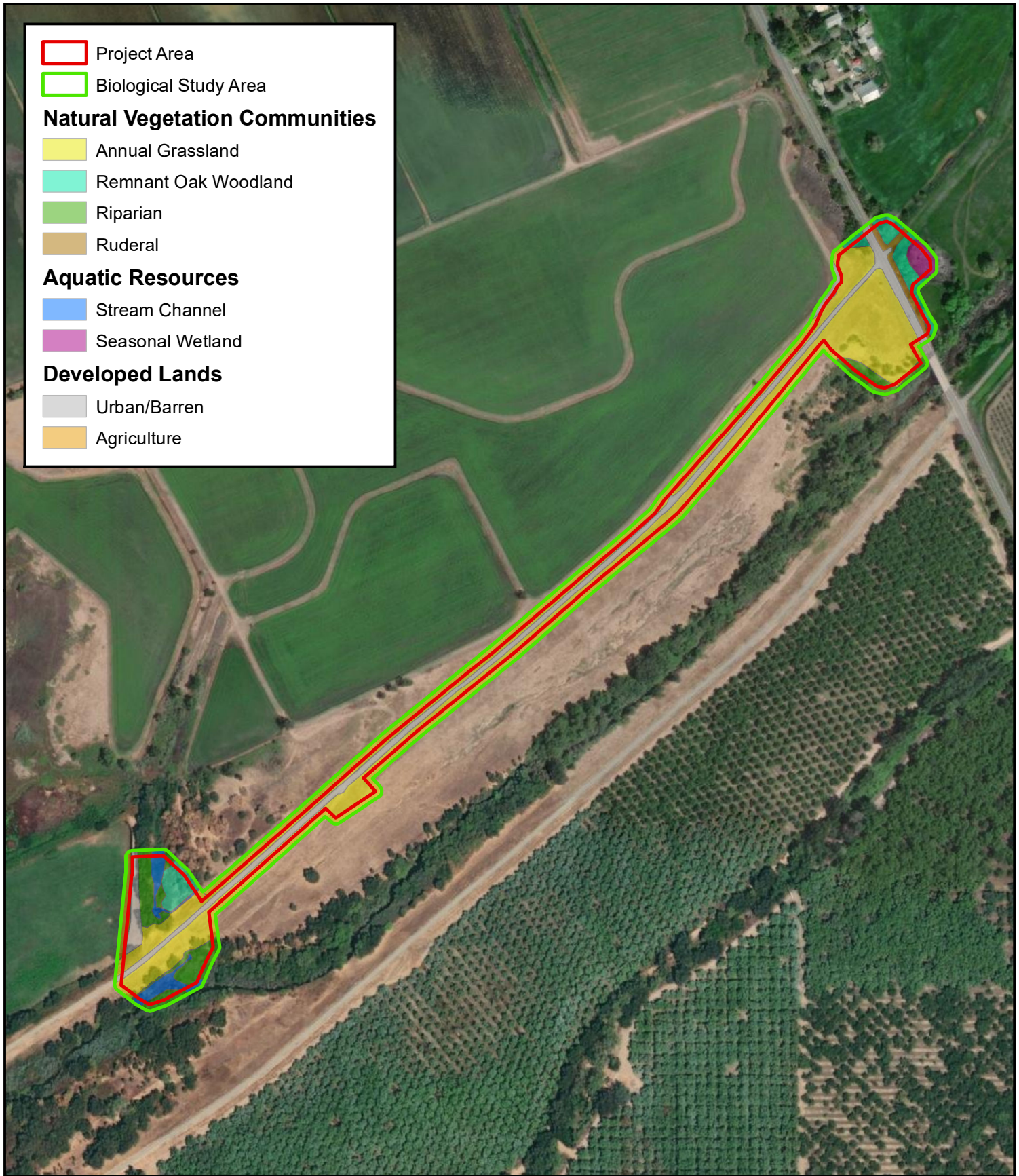
### **Aquatic Features**

#### **Stream Channel**

There are two instances of stream channel habitat within the BSA, both of which are within the project boundaries and only at the Gibbs Pond pipeline location. Dry Creek and an unnamed stream channel are both present at this location.

Approximately 0.10 acre of Dry Creek is present within the BSA. Dry Creek is a natural stream channel, identified as R4SBC, an intermittent, seasonally flooded streambed within the riverine system by the National Wetlands Inventory (NWI; NWI 2021). This feature has direct connectivity to Bear River, which is located approximately 1.2 miles southwest of the BSA and thus, pursuant to CDFW, is a jurisdictional WoUS and WoS.

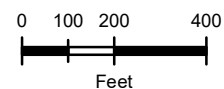




**FIGURE 4**

**VEGETATION COMMUNITIES**

GIBBS POND AND 40 MILE ROAD PIPE REPAIR PROJECT  
YUBA COUNTY, CALIFORNIA  
AUGUST 2021





In addition to Dry Creek, the BSA contains a small, unnamed drainage feature that is a tributary to Dry Creek. This unnamed stream channel is a small drainage channel with surface water originating at an existing pipe outfall location north of Hoffman Plumas Road. This channel is classified as R5UBFx by the NWI, indicating that it is an excavated semi-permanently flooded, unknown perennial riverine channel with an unconsolidated bottom (NWI 2021). The unnamed channel appears to have been excavated in otherwise dry land and it currently serves as a drainage from Gibbs Pond (north of the BSA) into Dry Creek.

#### Seasonal Wetland

A small area of seasonal wetland was visually identified within the BSA at the 40 Mile Road pipeline location. The wetland is classified as PEM1C on the NWI, indicating a persistent, seasonally flooded wetland within a palustrine system with emergent vegetation present (NWI 2021).

#### **Developed Lands**

##### Urban/Barren

Urban and barren lands within the BSA include developed or compacted land that is devoid of vegetation. This consists of the paved roadways (40 Mile Road), gravel levee roads (Hoffman Plumas Road), and barren road shoulders adjacent to these areas.

##### Agriculture

Agricultural land makes up the majority of the land use surrounding the BSA. Agricultural fields in this area include rice fields, orchards, and grain crops. Agricultural land supports minimal native vegetation but can act as habitat for native wildlife species, particularly birds and small mammals. However, this land is regularly disturbed by human use and is not expected to provide pristine, preferred habitat for these species.

#### **Wildlife**

Wildlife observed within the BSA during biological surveys included locally common bird species typically found in riparian and agricultural habitats such as acorn woodpecker (*Melanerpes formicivorus*), California scrub-jay (*Aphelocoma californica*), and killdeer (*Charadrius vociferus*). In addition to these common species, one special-status species, Swainson's hawk (*Buteo swainsoni*), was observed soaring over the BSA. Furthermore, species such as pacific chorus treefrog (*Pseudacris sierra*) and white-tailed deer (*Odocoileus virginianus*) were observed within and adjacent to the BSA. Due to the availability of aquatic and natural vegetation resources within the BSA, as well as its location along a potentially important habitat connectivity corridor, there is a potential for many other locally common wildlife species to utilize the area as a refuge from the nearby human development and for its natural resources.

#### **Habitat Connectivity**

The BSA is within an area of terrestrial connectivity Rank 4, representing a conservation planning linkage (CDFW 2021). This connectivity ranking indicates that the BSA is within an area that represents the best connection between core natural areas to maintain habitat connectivity but is not an irreplaceable and essential corridor. Dry Creek and nearby Bear River provide this connectivity opportunity by supporting a riparian corridor that may connect the Feather River to the west with habitat in the Sierra Nevada foothills to the east. The BSA is located in a margin between agricultural fields and may serve as a movement corridor for wildlife traveling through the largely agricultural area.

#### **DISCUSSION**

- a) *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?*

**Less Than Significant Impact with Mitigation.** The following sections describe special status species with potential to occur within the BSA, potential project effects, and mitigation measures to reduce potentially significant project effects to a less than significant level. With the incorporation of species-specific mitigation measures, the project would have a less than significant impact with mitigation.

Plant and wildlife species are considered to have special status if they have been listed as such by federal or state agencies or by one or more special interest groups, such as the California Native Plant Society (CNPS). Database searches identified 19 special status or sensitive wildlife species and six special status or sensitive plant species with potential to occur in the project vicinity. A complete list of these species was compiled with discussion and a determination of each species' potential to occur within the BSA, and is included in Appendix B. An analysis of habitat requirements, recorded observations, and field survey results determined that the following three species have a potential to occur within the BSA.

Low to Moderate Potential:

- Northern harrier (*Circus hudsonius*)
- Central Valley steelhead (*Oncorhynchus mykiss irideus* pop. 11)

High Potential:

- Swainson's hawk (*Buteo swainsoni*)

**Northern Harrier**

The northern harrier is a CDFW Species of Special Concern (SSC). This species is known to breed and forage in many different open habitats. Key components of northern harrier habitats are adequate vegetative cover, presence of abundant, suitable prey, and scattered lookout perches such as shrubs or fence posts. This may include marshes, meadows, lake borders, rivers, grasslands, weed fields, pastures, low croplands, sagebrush flats, and desert sinks. The northern harrier is a ground nester, nesting within patches of tall, dense vegetation in typically undisturbed areas. The primary threats to this species are a loss of nesting and foraging habitat, as well as nest failure due to human disturbance (Shuford & Gardali 2008).

Survey Results for Northern Harrier

Prior to field surveys, a search was conducted on the California Natural Diversity Database (CNDDB) which indicated that there are four occurrences of the species within the project vicinity, all approximately 6-8 miles away from the BSA, and recorded in 2000. In addition, biological surveys identified potentially suitable habitat for the northern harrier within the BSA that included wetted areas, riparian vegetation, annual grasslands, and nearby agricultural fields. The species was not observed during the biological survey; however, due to the presence of suitable habitat, it is presumed to have a low-to-moderate potential to occur within the BSA.

Project Impacts to Northern Harrier

Project impacts to northern harrier would be limited to temporary disturbance of approximately 0.07 acres of habitat, as well as a permanent loss of 0.01 acres of potentially suitable nesting habitat. **Mitigation Measure (MM) BIO-13** through **MM BIO-15**, would ensure no direct effects to northern harrier individuals would occur as a result of the proposed project.

**Swainson's Hawk**

Swainson's hawk is state-listed as threatened. Swainson's hawk migrates annually from wintering areas in South America to breeding locations in northwestern Canada, the western U.S., and Mexico. In California, Swainson's hawks nest throughout the Sacramento Valley in large trees in riparian habitats and in isolated trees in or adjacent to agricultural fields. The breeding season extends from late March through late August, with peak activity from late May through July (England et al. 1997). In the Sacramento Valley, Swainson's hawks forage in large, open agricultural habitats, including alfalfa and hay fields (CDFW 1994). The

breeding population in California has declined by an estimated 91% since 1900; this decline is attributed to the loss of riparian nesting habitats and the conversion of native grassland and woodland habitats to agriculture and urban development (CDFW 1994).

#### Swainson's Hawk Survey Results

Prior to field surveys, literature research was conducted that indicates a high number of recorded occurrences of the species within the project vicinity. There are over 80 CNDDDB occurrences of the species within 10 miles of the BSA. Furthermore, the species was observed nesting within less than 0.1 mile of the BSA in 2004. More recent occurrences of the species (2015, 2016) are along the Feather River approximately six miles from the BSA. Additionally, during April 2021 biological surveys, riparian woodland habitat was identified within the BSA that has the potential to serve as suitable Swainson's hawk nesting habitat. One Swainson's hawk individual was observed soaring over the BSA during this survey, although no direct evidence of the species nesting within the BSA was identified. Due to the presence of suitable habitat, the many occurrences of the species, and the observation of the species passing through the BSA, the species was determined to have a high potential to occur within the BSA.

#### Project Effects to Swainson's Hawk

Project impacts to Swainson's hawk would be limited to temporary disturbance of approximately 0.07 acres and permanent loss of approximately 0.01 acres of potentially suitable nesting habitat. Incorporation of **MM BIO-13** through **MM BIO-16**, would ensure no take of Swainson's hawk individuals or nest sites would occur as a result of the proposed project. With the avoidance of take, no Incidental Take Permit under Section 2081 of CFG Code would be required for potential effects to Swainson's hawk.

#### **Central Valley Steelhead**

The Central Valley steelhead is an anadromous fish species that was once abundant in coastal California and Central Valley drainages. The distinct population segments (DPS) of Central Valley steelhead include steelhead in the Sacramento and San Joaquin Rivers basins in the Central Valley. The species spawns in small, freshwater streams and migrate to the ocean after taking one to several years to mature. Adult steelhead return to their natal streams to spawn, completing the life cycle.

#### Survey Results for Central Valley Steelhead

The BSA includes an area of Dry Creek, which is a tributary to the Bear River and the Feather River. According to the CNDDDB, the species has been reported in the Lower Feather River (2003-2012). In addition, Dry Creek is accessible to fish from both the Feather and Bear Rivers, and it contains potentially suitable habitat for the species. Dry Creek is not, however, within mapped Critical Habitat for the species. Due to the species' known range and the potentially suitable habitat within Dry Creek, it was determined to have a low to moderate potential to occur.

#### Project Impacts to Central Valley Steelhead

Central Valley steelhead would have the potential to occupy reaches of Dry Creek within the project area. However, the project would have no impacts to Dry Creek; therefore, the project would have no impacts to the species and no avoidance, minimization or mitigation measure are necessary or proposed.

- b) *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*

**Less Than Significant with Mitigation.** The following sections describe sensitive natural communities that occur within the project BSA, potential project effects to sensitive natural habitats, and mitigation measures to reduce potentially significant project effects to a less than significant level. With the

incorporation of mitigation measures, and compliance with all regulatory permitting, the project would have a less than significant impact with mitigation.

Habitats are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status plants or animals occurring on-site. Four habitats of special concern were identified within the project BSA: stream channel, seasonal wetland, riparian habitat, and Chinook salmon Essential Fish Habitat (EFH).

### **Stream Channel**

Dry Creek, a tributary to Bear River, runs through the southern portion of the BSA at the Gibbs Pond pipeline location. In addition, there is a small, intermittent, unnamed stream channel which flows via culvert pipe into Dry Creek at this location. Dry Creek has direct connectivity to Bear River approximately 1.2 miles southwest of the BSA. Bear River is considered a traditional navigable water of the U.S. and with direct connectivity, Dry Creek would also be considered a jurisdictional water of the U.S., water of the State, and CDFW jurisdictional habitat. As Dry Creek is a jurisdictional water of the U.S., State, and CDFW, the intermittent unnamed channel is considered jurisdictional as well, due to its direct connection to another jurisdictional feature.

During biological surveys, approximately 0.37 acres of stream channel were mapped within the BSA. Signs such as cut banks and vegetation growth and destruction patterns were used to identify and map the OHWM of stream channels within the BSA.

### **Project Effects to Stream Channel**

The project is anticipated to have approximately 0.01 acres of temporary impacts and approximately <0.001 acres (approximately 17 square feet) of permanent impacts to the unnamed stream channel, due to the replacement of new CMP and associated gate structures. The project would have no impacts to Dry Creek (**Figure 5. Project Impacts to Habitats of Special Concern**). Biological BMPs **BIO-1** through **BIO-12**, would be incorporated into the project in order to avoid and/or minimize any potential construction effects to stream channel habitat and other sensitive natural habitats. Temporary effects would be returned to pre-construction conditions, and permanent effects to the stream channel habitat are considered negligible. Therefore, no compensatory mitigation for the permanent or temporary impacts to stream channel habitat is proposed.

### **Riparian Habitat**

Riparian habitats occur alongside sources of surface water and are often centers of biological activity. The general structure of riparian habitats typically involves a canopy, subcanopy, and an understory shrub layer. Lianas and herbaceous plants constitute the groundcover vegetation. The understory is very thick, and fallen limbs and debris create complex habitat elements that contribute to a riparian habitat's ecological significance. Riparian habitat associated with Dry Creek was mapped at both the Gibbs Pond and 40 Mile Road pipeline locations. Approximately 1.02 acres of riparian habitat occurs within the BSA.

### **Project Effects to Riparian Habitat**

The project is anticipated to have approximately 0.07 acres of temporary impacts and approximately 0.01 acres of permanent impacts to riparian habitat, due to de-grading of the existing levee section to the proposed culvert profile, installation of the pipelines, and compacting the area with imported fill. In addition, the project would require the removal of approximately eight trees.

**Table 3. Project Impacts to Trees**

<b>Species</b>	<b>Number of Trees Planned for Removal</b>	<b>DBH Range (inches)</b>
Oregon ash ( <i>Fraxinus latifolia</i> )	7	4-8
Valley oak ( <i>Quercus lobata</i> )	1	24



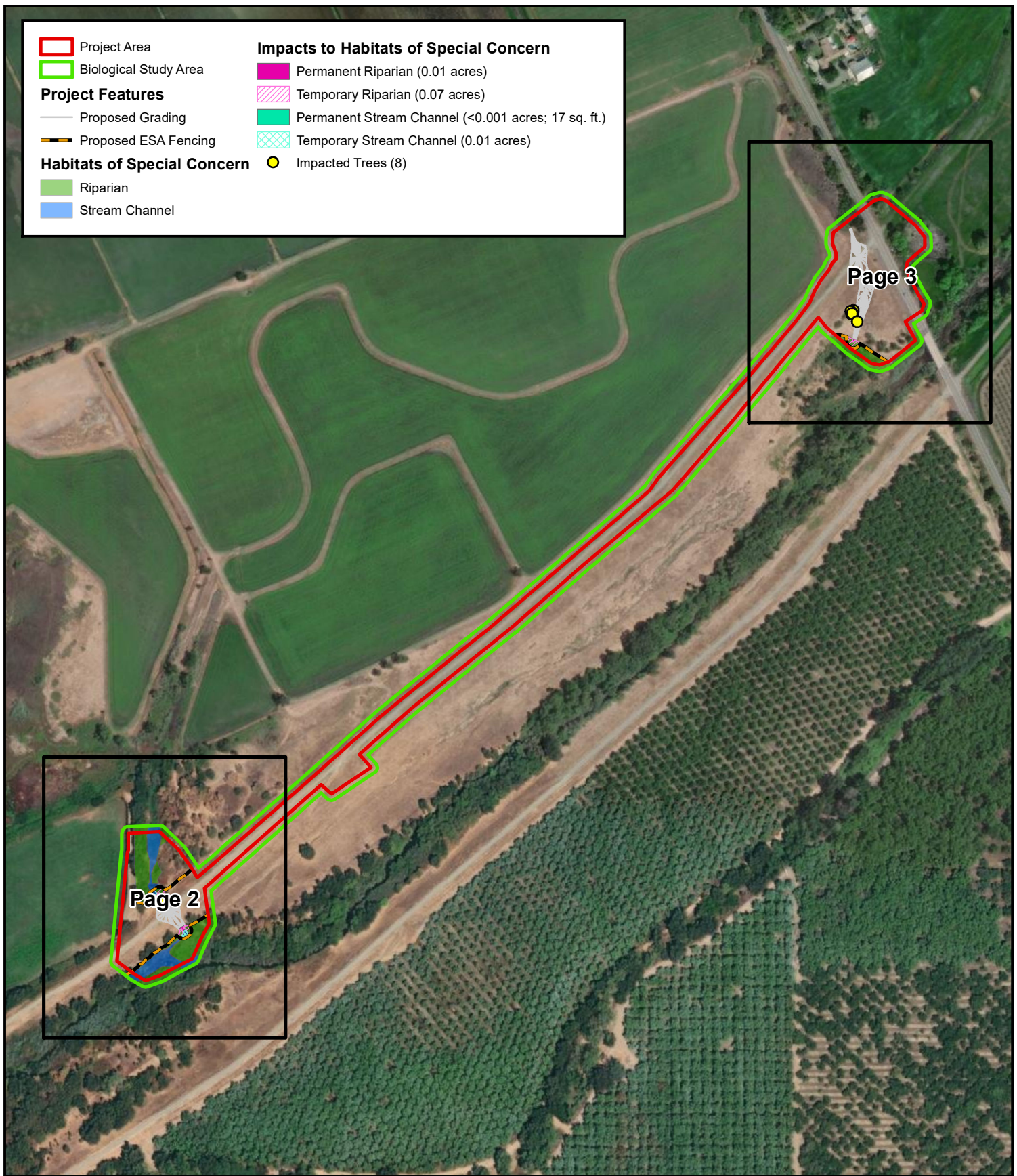


FIGURE 5

**PROJECT IMPACTS TO HABITATS OF SPECIAL CONCERN**  
**PAGE 1 OF 3**

GIBBS ROAD PIPE REPAIR PROJECT  
 YUBA COUNTY, CALIFORNIA  
 SEPTEMBER 2021





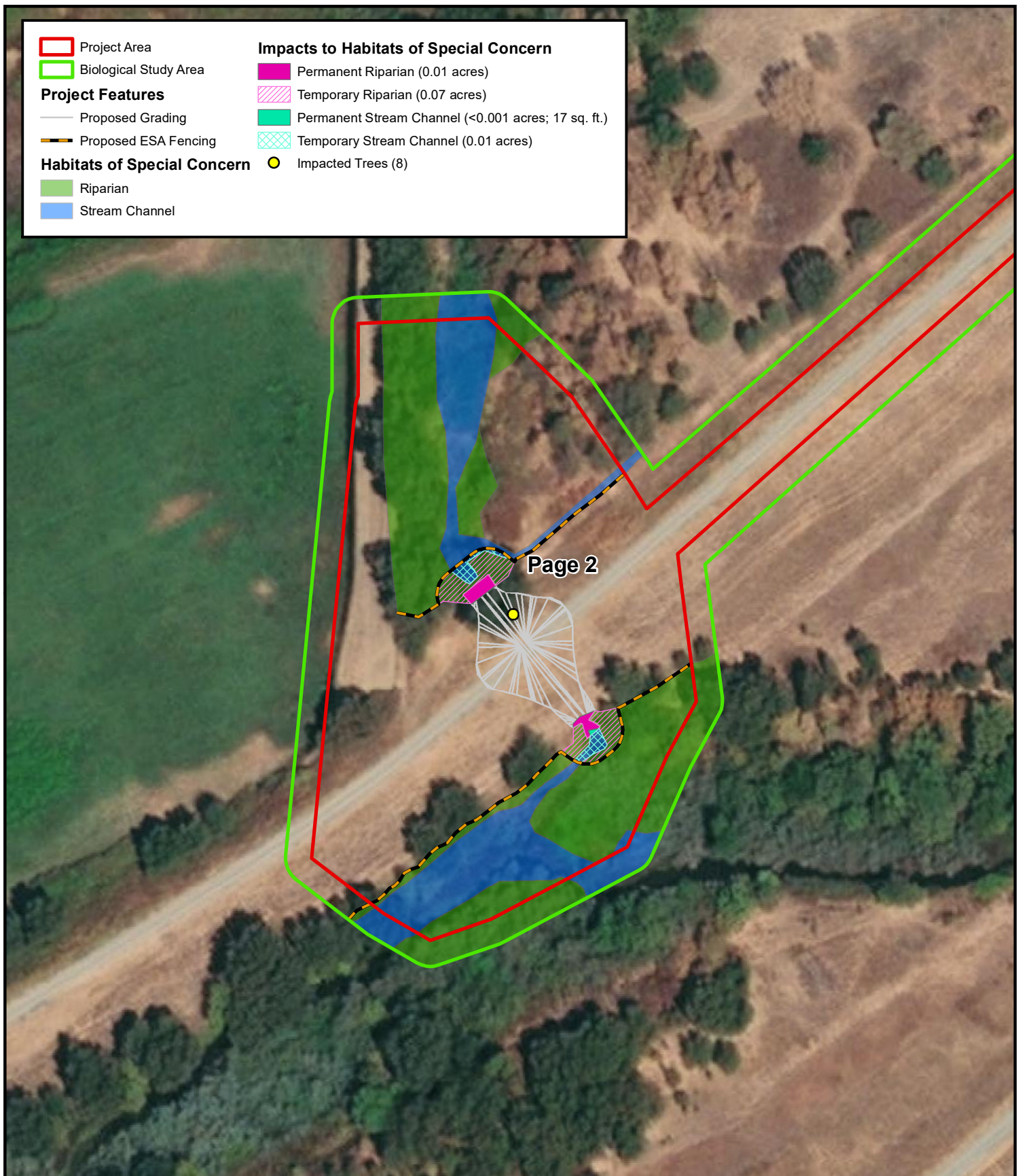
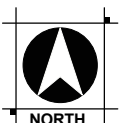
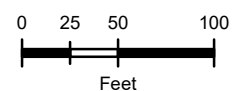


FIGURE 5

**PROJECT IMPACTS TO HABITATS OF SPECIAL CONCERN**  
**PAGE 2 OF 3**

GIBBS ROAD PIPE REPAIR PROJECT  
 YUBA COUNTY, CALIFORNIA  
 SEPTEMBER 2021





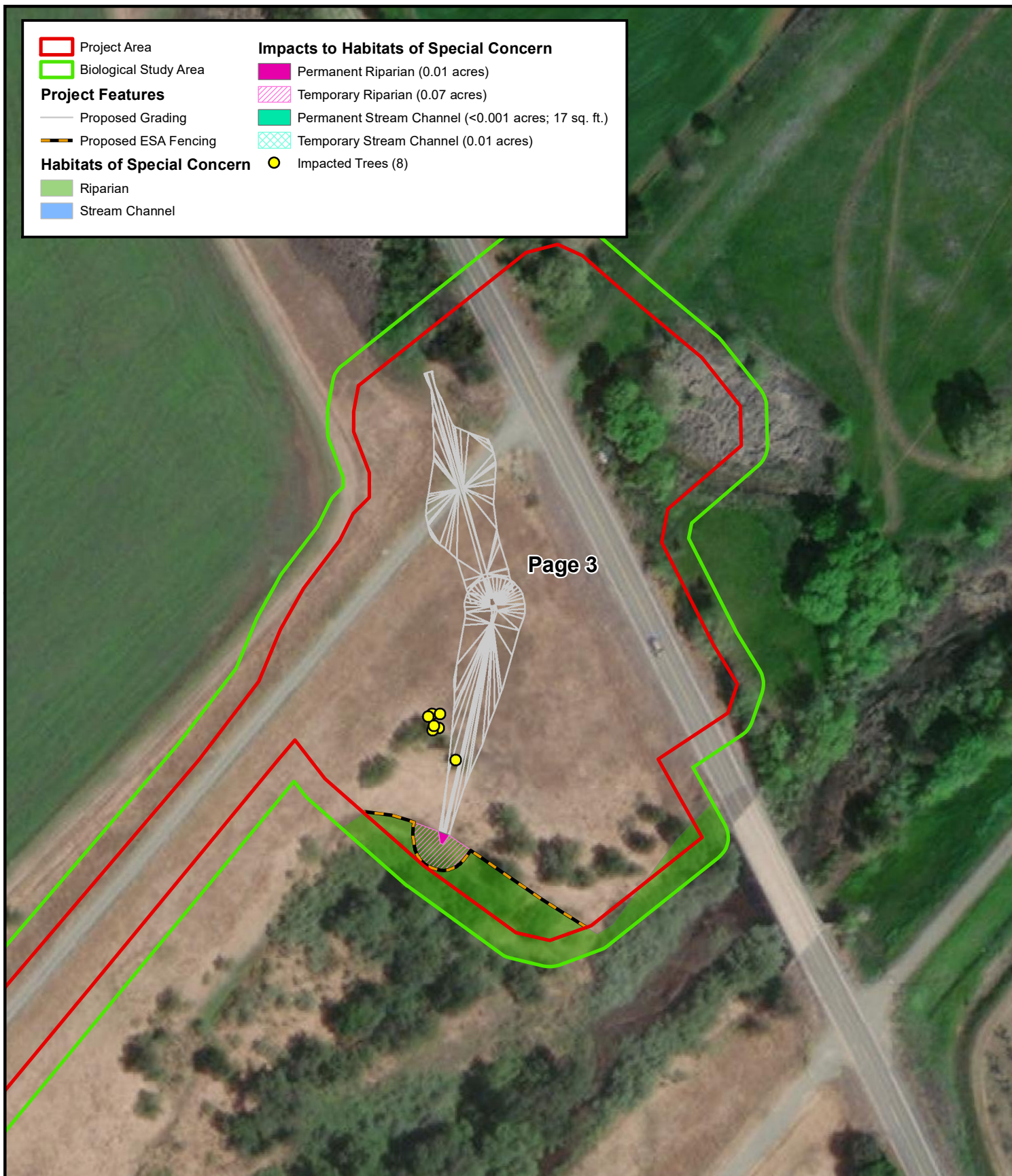
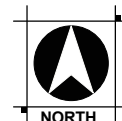
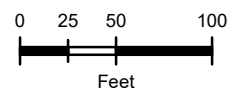


FIGURE 5

**PROJECT IMPACTS TO HABITATS OF SPECIAL CONCERN**  
**PAGE 3 OF 3**

GIBBS ROAD PIPE REPAIR PROJECT  
 YUBA COUNTY, CALIFORNIA  
 SEPTEMBER 2021



**WOOD RODGERS**

Biological BMPs **BIO-1** through **BIO-12** would be incorporated into the project to avoid and minimize effects to sensitive natural habitats. In addition to biological BMPs, which include stipulations for recontouring and revegetation to pre-construction conditions, **MM BIO-17** would be implemented by the project to provide compensatory mitigation for project impacts to riparian habitat. Any additional mitigation measures or compensatory measures designated through regulatory permitting permits would be incorporated into the project.

### **Chinook Salmon Essential Fish Habitat**

Designated EFH is identified under the Magnuson-Stevens Act and functions in protecting and enhancing habitat for federally protected fish species. EFH for Chinook salmon has been identified and mapped on the West Coast by the NMFS. Dry Creek within the BSA is located within NMFS designated Chinook salmon EFH, as a water feature which is accessible to fish and thus could function as EFH. The BSA also contains an unnamed tributary to Dry Creek; however, this tributary connects to Dry Creek via a culvert and is inaccessible to fish.

#### Project Effects to Chinook Salmon EFH

The project is not anticipated to impact Dry Creek. Therefore, no project effects to Dry Creek Chinook salmon EFH would occur. Additionally, with the implementation of biological BMPs **BIO-1** through **BIO-12**, no indirect impacts to Chinook salmon EFH are anticipated, and no mitigation measures are necessary or proposed.

### **Seasonal Wetland**

Seasonal wetlands are flooded frequently, creating unique anaerobic conditions which support soils and vegetation typically not found in upland areas. Wetlands are productive habitats, and their distinctive conditions warrant consideration as a vital part of a hydrologic system. Seasonal wetlands are considered special aquatic sites by the USACE and RWQCB. Approximately 0.20 acres of seasonal wetland were identified within the BSA, at the 40 Mile Road pipeline location. This wetland and associated project activities are discussed in subsection c) below.

- c) *Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

**Less than Significant.** Approximately 0.20 acres of seasonal wetland were identified within the BSA, at the 40 Mile Road pipeline location. This wetland was identified as such by visual reconnaissance, as well as aerial imagery and findings from the NWI. A wetland delineation pursuant to the USACE guidelines was not conducted on this feature because the seasonal wetland would not be disturbed by project activities.

#### Project Effects to Seasonal Wetland

Impacts to seasonal wetland habitat within the BSA are not anticipated. Project activities within the vicinity of the seasonal wetland would not cause ground disturbance to the area. The intake of the existing 18-inch diameter CMP at 40 Mile Road, located on the southeast side of 40 Mile Road (outside of the wetland), would be filled with a low pressure flowable grout, and abandoned in place. Capping of the pipe outlet would occur within the wetland and would include light footwork. No equipment or machinery would be used within the seasonal wetland, and secondary containment BMPs would be in place during work activities within the wetland area. Therefore, no temporary or permanent impacts to the seasonal wetland are anticipated as a result of the proposed project.

Furthermore, biological BMPs **BIO-1** through **BIO-12** would be implemented to ensure that potential effects to the seasonal wetland habitat would be avoided and minimized. With the lack of direct or indirect impacts to seasonal wetland habitat, and the inclusion of biological BMPs, no compensatory mitigation is



required or proposed for seasonal wetland habitat. Project effects to state or federally protected wetlands would be considered less than significant.

- d) *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

**No Impact.** The project is not anticipated to have any effects to the habitat connectivity for birds, fish, or small and medium terrestrial wildlife. No loss of or impediments to habitat connectivity are anticipated.

- e) *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

**No Impact.** The project would not conflict with any local policies or ordinances that protect biological resources.

- f) *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

**No Impact.** The project area does not occur within a designated Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan. Therefore, the project would not conflict with the provisions of any habitat conservation plan, and no impact would occur.

### ***BEST MANAGEMENT PRACTICES***

The following general and construction BMPs will be implemented as part of the project:

**BIO-1:** Contract specifications will include the following biological BMPs:

- Existing vegetation shall be protected to the greatest extent feasible in order to reduce erosion and sedimentation.
- Exposed soils shall be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.
- Exposed soils shall be stabilized through watering or other measures on order to prevent the movement of dust at the project site caused by wind and construction activities such as traffic and grading activities.
- All concrete curing activities would be conducted in a manner that would minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.
- All construction materials, vehicles, stockpiles, and staging areas would be situated as far outside of the stream channel as feasible. All stockpiles would be covered as completely as feasible.
- All erosion control measures and storm water control measures would be properly maintained until final grading has been completed and permanent erosion control measures are implemented.
- All disturbed areas would be restored to pre-construction contours and revegetated with native or approved non-invasive exotic species, where applicable, either through hydroseeding or other means.
- All construction materials would be hauled off-site after completion of construction.

- BIO-2:** Prior to the start of construction activities, the project limits that are in proximity to sensitive natural habitats must be marked with high visibility Environmentally Sensitive Area (ESA) fencing or staking to ensure construction will not further encroach into waters or sensitive habitats. The project biologist will periodically inspect the ESA to ensure that sensitive locations remain undisturbed.
- BIO-3:** Refueling or maintenance of equipment without secondary containment shall not be permitted to occur within 100 feet of stream channels. All refueling and maintenance that must occur within 100 feet of stream channels must occur over plastic sheeting or other secondary containment measures in order to capture accidental spills before they can contaminate the soil. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).
- BIO-4:** Equipment will be checked daily for leaks and will be well-maintained to prevent lubricants and any other deleterious materials from entering stream channels and associated riparian areas.
- BIO-5:** Vehicle maintenance, staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants must remain outside of sensitive habitat areas marked with high-visibility fencing. Any necessary equipment washing must occur where the water cannot flow into sensitive habitat communities.
- BIO-6:** A chemical spill kit must be kept on-site and available for use in the event of a spill.
- BIO-7:** Secondary containment consisting of plastic sheeting or other impermeable sheeting shall be installed underneath all stationary equipment to prevent petroleum products or other chemicals from contaminating the soil and/or from spilling directly into stream channels. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).
- BIO-8:** Prior to arrival at the project site and prior to leaving the project site, construction equipment that may contain invasive plants and/or seeds will be cleaned to reduce the spreading of noxious weeds.
- BIO-9:** Hydroseed and plant mixes to be used during or post-construction must consist of a biologist-approved plant palette seed mix of regionally-appropriate native species.
- BIO-10:** Clearing and grubbing will be accomplished at a maximum speed of three (3) miles per hour to allow wildlife enough time to escape the project area.
- BIO-11:** The contractor must dispose of all food-related trash in closed containers and must remove it from the project area each day during construction. Construction personnel must not feed or attract wildlife to the project area.
- BIO-12:** The contractor must not apply rodenticide or herbicide within the project area.

### ***MITIGATION MEASURES***

- MM-BIO-13:** Construction personnel must receive environmental awareness training. Awareness training shall be given by the project biologist(s) who have experience in the natural history of species that may occur within the project area. The training will cover protocol for, identification of, and natural history of the special status species that have the potential to occur within the project area (such as Swainson's hawk and northern harrier).

**MM-BIO-14:** The construction contractor shall avoid removing any vegetation during the nesting bird season (February 1 to August 31). If vegetation must be removed within the nesting season, a pre-construction nesting bird survey must be conducted no more than three (3) days prior to vegetation removal. The vegetation must be removed within three (3) days from the completion of the nesting bird survey.

A minimum 50-foot no-disturbance buffer will be established around any active nest of migratory birds, and a minimum 300-foot no-disturbance buffer will be established around any nesting raptor species. The contractor must immediately stop work in the nesting area until the appropriate buffer is established, and the contractor is prohibited from conducting work that could disturb the birds (as determined by the project biologist and in coordination with RD 817) in the buffer area until a qualified biologist determines the young have fledged. A reduced buffer can be established if determined appropriate by the project biologist and approved by RD 817 and CDFW.

**MM-BIO-15:** The removal of large (>6 inches DBH) diameter trees will be avoided to the greatest extent practicable. If feasible, any large diameter trees that cannot be protected within the project impact area shall be removed outside of the Swainson's hawk nesting season (February 1 – August 31) prior to construction.

**MM-BIO-16:** If project construction work is scheduled between February 1 – August 31, the project biologist shall conduct a series of focused surveys for Swainson's hawk nest sites prior to construction. The project biologist shall follow the timing and methodology described in the Swainson's Hawk Technical Advisory Committee *Recommended Timing and Methodology For Swainson's Hawk Nesting Surveys In California's Central Valley* (2000). The survey shall be conducted in all suitable Swainson's hawk nesting habitat within a minimum ¼-mile of the project area. Areas that are not accessible without trespassing shall be surveyed from accessible areas using binoculars and spotting scopes. If Swainson's hawk breeding activity is identified during any of the surveys or during construction, the project biologist shall stop work and consult with CDFW to determine how to proceed. A buffer from work activities or additional appropriate protective measures may be developed in coordination with CDFW.

**MM-BIO-17:** Permanent impacts to riparian habitat will be mitigated for by the payment of an in-lieu fee or purchase of credits from a regionally-appropriate, agency-approved mitigation bank. Credits for permanent impacts to riparian habitat will be purchased at a 2:1 ratio.

## ***FINDINGS***

With the incorporation of feasible project-specific mitigation measures for sensitive species and habitats, and completion of the necessary permitting through regulatory agencies, project effects relating to biological resources would be considered a **Less than Significant Impact with Mitigation**.

## 2.5 CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### REGULATORY SETTING

CEQA established statutory requirements for establishing the significance of historical resources in Public Resources Code (PRC) Section 21084.1. The CEQA Guidelines (Section 15064.5[c]) also require consideration of potential project impacts to "unique" archaeological sites that do not qualify as historical resources. The statutory requirements for unique archaeological sites that do not qualify as historical resources are established in PRC Section 21083.2. These two PRC sections operate independently to ensure that significant potential effects on historical and archaeological resources are considered as part of a project's environmental analysis. Historical resources, as defined in Section 15064.5 as defined in the CEQA regulations, include 1) cultural resources listed in or eligible for listing in the California Register of Historical Resources (California Register); 2) cultural resources included in a local register of historical resources; 3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in one of several historic themes important to California history and development.

Under CEQA, a project may have a significant effect on the environment if the project could result in a substantial adverse change in the significance of an historical resource, meaning the physical demolition, destruction, relocation, or alteration of the resource would be materially impaired. This would include any action that would demolish or adversely alter the physical characteristics of an historical resource that conveys its historic significance and qualifies it for inclusion in the California Register or in a local register or survey that meets the requirements of PRC Section 5020.1(l) and 5024.1(g). PRC Section 5024 also requires state agencies to identify and protect state-owned resources that meet National Register of Historic Place (National Register) listing criteria. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

CEQA and the CEQA Guidelines also recommend provisions be made for the accidental discovery of archaeological sites, historical resources, or Native American human remains during construction (PRC Section 21083.2(i) CCR Section 15064.5[d and f]).

### AFFECTED ENVIRONMENT

Located within California's Sacramento Valley at an elevation of 55-70 ft. above mean sea level (amsl), the project is situated in a predominately rural landscape marked by extensive agricultural areas and relatively little development. A product of the pre-reclamation seasonal flooding of the Bear River that deposited layer upon layer of alluvial sediments, the flat terrain and fertile soils in the area are conducive

to crop cultivation. The project lays approximately 5 miles northeast of the confluence of the Bear River and the Feather River.

Changes to the regional landscape brought about by the development of irrigation and flood control systems, coupled with the widespread agricultural activity that ensued with the influx of Euroamericans after 1849, have substantially altered the natural environmental setting of the project area.

The Area of Potential Effects (APE) for the project includes all design elements and activities as outlined above in Section 1.4, sufficiently buffered to provide for adequate construction workspaces, access, and an equipment and/or material staging area (Figure 3. Project Features). Construction access would be via 40 Mile Road and the Dry Creek north levee access road. Construction staging would occur within the APE on adjacent private property or on top of the Dry Creek north levee. No new road construction or maintenance of existing roads will occur outside the APE. No utilities will require relocation as part of the project.

With most project activity occurring at or adjacent the Dry Creek north levee, the project APE extends approximately 3,250 ft. along this feature. In all, the APE, which is consistent with the project area, amounts to approximately 8.3 acres (see Figure 3. Project Features). The vertical APE for the project varies at the two locations with a maximum depth of excavation of 24 feet at Gibb's Pond and 18 feet at Forty Mile Road.

## **DISCUSSION**

- a) *Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?*

**Less than Significant Impact.** No prehistoric artifacts, archaeological features, or anthropogenic soils were observed within the APE as a result of the pedestrian survey. One historic-era resource was identified in the APE: Site P-58-3355/CA-YUB-2084H, a segment of the Lower Dry Creek Levee. Because the site is a linear feature extending widely beyond the proposed project APE and is ultimately a component of even more expansive local irrigation / flood control systems, only spatially relevant portions of the resource were formally documented in this inventory. California Department of Parks and Recreation (DPR) site record forms were completed for P-58-3355/CA-YUB-2084H.

The Lower Dry Creek North Levee (P-58-3355/CA-YUB-2084H) would incur minor ground disturbing activities associated with project construction. Levees, and their appurtenances, undergo ongoing improvements, alterations, and repairs over time as a matter of course. Post construction, the site will fully retain its original locational alignment, basic compositional materials, and essential overall function. Therefore, the project would have a less than significant effect to Lower Dry Creek North Levee (P-58-3355/CA-YUB-2084H), and no mitigation measures are necessary.

- b) *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

**Less than Significant Impact.** Efforts to identify cultural resources in the APE included a search of site records and inventory reports on file at North Central Information Center (NCIC), background archival research including reviews of historic plats, imagery, etc., consultation with Native American groups, and an intensive pedestrian surface survey. On May 14, 2021, Dokken Engineering archaeologist, Michelle Campbell, conducted a pedestrian surface survey of the entire APE.

The surface survey was conducted via controlled transects spaced at no greater than 5-meter (16 foot) intervals within and along the proposed APE corridor encapsulating the pipe repair locations and levee top access road, as well as all other project prescribed elements involving potential ground disturbance. No prehistoric artifacts, archaeological features, or anthropogenic soils were observed within the APE as a result of the pedestrian survey.

Based on proximity to the Bear River and the availability of important resources, the APE would have been a targeted location of prehistoric activities. However, geoarchaeological study by Meyer and Rosenthal (2008) indicate that the project area is bounded by older Pleistocene age soils to the north, which are low sensitivity, and Historic-Modern age soils of variable sensitivity to the south. Cut banks, irrigation ditch walls and rodent burrows within the APE provided an opportunity to visually inspect exposed subsurface soils for the presence of artifacts, archaeological features, and anthropogenic soils. No cultural resources were observed.

Because most project prescribed ground disturbance will occur almost exclusively within previously disturbed contexts associated with agricultural cultivation and levee construction and maintenance, the potential for the project to impact intact subsurface cultural resource deposits in the APE is *low*.

Consistent with PRC Section 2108.3.1, consultation with local Native American groups occurred and is discussed further in Section 2.18 Tribal Cultural Resources.

- c) *Would the project disturb any human remains, including those interred outside of dedicated cemeteries?*

**Less than Significant Impact.** All identification efforts for cultural resources did not indicate the likelihood of the presence of human remains in the project area. With any project conducting ground disturbance activities, there is always the possibility that unmarked burials may be unearthed during construction. The United Auburn Indian Community of the Auburn Rancheria (UAIC) requested measures to protect tribal cultural resources including buried remains and inclusion of **MM-TCR-5** would further minimize the potential for cultural impacts should any be discovered during construction.

#### ***AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES***

As the potential for cultural resources to be present within the APE ranges from low to variable, project effects to cultural resource are considered less than significant and no mitigation measures are necessary. See Section 2.18 Tribal Cultural Resources for UAIC requested measures **MM-TCR-1** through **MM-TCR-5**.

#### ***FINDINGS***

The project would have **Less Than Significant Impact** relating to cultural resources.

## 2.6 ENERGY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### DISCUSSION

- a) *Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

**No Impact.** The project would comply with standard construction BMPs and the Yuba County General Plan relating to the efficient use of energy resources. Therefore, the project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation, and no impact would occur.

- b) *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

**No Impact.** The project includes the replacement of two gravity-flow pipes that provide storm drain and irrigation drainage through the northern levee of Dry Creek. The project would not conflict with or obstruct any state or local plans for renewable energy or energy efficiency. Therefore, no impact would occur.

### FINDINGS

The project would have **No Impact** relating to energy or energy resources.

## 2.7 GEOLOGY AND SOILS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### AFFECTED ENVIRONMENT

The project is located in the Sacramento Valley portion of the Great Valley Geomorphic Province, which is characterized by a thick sequence of sedimentary rock units overlain by alluvial sediments derived primarily from erosion of the Sierra Nevada Mountains to the east. Overlying the bedrock units in the mid-basin areas of the Sacramento Valley are Late Pleistocene and Holocene Age alluvial deposits. Natural soils within the project area consist exclusively of San Joaquin loam and Columbia fine sandy loam.

### DISCUSSION

- a) *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:*
- i) *Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?*
  - ii) *Strong seismic ground shaking?*
  - iii) *Seismic-related ground failure, including liquefaction?*
  - iv) *Landslides?*



**No Impact.** According to the CDC Fault Activity Map of California (CDC 2015), there are no known active faults within the project area or directly adjacent to the project area. The nearest fault is the Spencerville Fault (Late Quaternary) approximately eight miles northeast of the project area. The project would consist of minor ground disturbance and would not substantially change the existing conditions such that it would result in new risks to expose people or structures to potential substantial adverse effects, including risk of loss, injury, or death involving rupture of a known fault, strong seismic ground shaking, seismic-related ground failure, or landslides. Therefore, no impact would occur.

*b) Would the project result in substantial soil erosion or the loss of topsoil?*

**Less than Significant Impact.** The proposed project would require minor ground-disturbing activities within the areas of the Gibbs Pond and 40 Mile Road pipe repair project area. Construction activities that may result in erosion or loss of topsoil would include operations of de-grading the existing levee section for removal and replacement of the new pipe sections at the Gibbs Pond and 40 Mile Road project area. The project area would include a total disturbed area greater than one acre and would require a Section 402 General Construction Permit and Stormwater Pollutant Prevention Plan (SWPPP). Hydrology and water quality BMP **HYD-1** in Section 2.10 would require compliance with federal and state water quality control requirements and would include sediment and erosion control BMPs to reduce any potential significant effect to a less than significant level.

*c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

**No Impact.** The project area is not located on a geologic unit or soil that is known for unstable conditions. During construction, soils may become unstable during de-grading activities; however, the area of ground disturbance and construction activities necessary for the construction of the project would not occur on unstable soils and would not result or potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. Backfilling and compaction of the de-graded areas would occur as part of the project in order to return the site to pre-construction conditions and contours. Therefore, no impact would occur.

*d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?*

**No Impact.** Natural soils within the project area consist exclusively of San Joaquin loam and Columbia fine sandy loam. These soil types are not known as expansive soils, as defined in Table 18-1-B of the Uniform Building Code, and construction within these soil types would not create substantial risks to life or property. Therefore, no impact would occur.

*e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?*

**No Impact.** The project would not utilize septic tanks or an alternative waste water disposal system on the site. Therefore, the project would have no impact due to soils incapable of adequately supporting septic systems.

*f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

**No Impact.** Yuba County straddles the Great Valley and Sierra Nevada geomorphic provinces. According to the University of California Museum of Paleontology (UCMP), there are no known recorded findings of fossils in Yuba County (UCMP 2021). Additionally, no findings of unique paleontological resources or sites or unique geological features were identified during the record search and pedestrian survey within the project area. Therefore, no impact would occur.

***BEST MANAGEMENT PRACTICES***

Biological BMP **BIO-1** (see Section 2.4) would implement general sediment and erosion control BMPs. In addition, hydrology and water quality BMP **HYD-1** (see Section 2.10) would include construction sediment and erosion control BMPs as part of the project SWPPP, pursuant federal and state water quality control requirements.

***FINDINGS***

The project would have a **Less than Significant Impact** relating to geology and soils.

## 2.8 GREENHOUSE GAS EMISSIONS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### REGULATORY SETTING

While climate change has been a concern since at least 1988, as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned with the emissions of GHG related to human activity that include CO<sub>2</sub>, CH<sub>4</sub>, NO<sub>x</sub>, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG emissions to: 1) 2000 levels by 2010; 2) 1990 levels by the 2020; and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB create a plan that includes market mechanisms and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06 further directs state agencies to begin implementing AB 32, including the recommendations made by the state's Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels was to be reduced by at least 10 percent by 2020.

Climate change and GHG reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing GHG emissions reductions and climate change. California, in conjunction with several environmental organizations and several other states, sued to force the U.S. EPA to regulate GHG as a pollutant under the Clean Air Act (*Massachusetts vs. [EPA] et al.*, 549 U.S. 497 (2007)). The court ruled that GHG does fit within the Clean Air Act's definition of a pollutant, and that the U.S. EPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions.<sup>[1]</sup>

According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(i)(1) and 15130. To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future

<sup>[1]</sup> <http://www.epa.gov/climatechange/endangerment.html>

projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

As the project is an auxiliary pump station and would not have any effect on traffic capacity, the only additional greenhouse gases that would be created as part of this project would occur only during construction.

### ***DISCUSSION***

- a) *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

**Less than Significant Impact.** The project would not generate GHG emissions through operation of the completed project. Short-term GHG emissions would occur during construction through the use of gas-powered construction vehicles. GHG emissions created during temporary construction activities are not expected to generate CO<sub>2</sub> in quantities that would individually or cumulatively contribute to a significant impact on the environment. Therefore, the project would have a less than significant impact relating to the generation of GHG emissions.

- b) *Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

**No Impact.** The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

### ***FINDINGS***

The project would have a **Less and Significant Impact** relating to GHG emissions.

## 2.9 HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### REGULATORY SETTING

Hazardous materials and hazardous wastes are regulated by many state and federal laws. These include not only specific statutes governing hazardous waste, but also a variety of laws regulating air and water quality, human health and land use.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976 and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

### AFFECTED ENVIRONMENT

The project occurs within a rural area, vacant of any adjacent residential homes. Adjacent land use includes agricultural areas and open space. Construction access would be via 40 Mile Road and the Dry Creek Levee access road. Construction staging would occur on adjacent private property or on top of the Dry Creek Levee. The project is not expected to require permanent acquisition of any property; however, construction easements will be needed from adjacent property owners, and an encroachment permit will be obtained from the Central Valley Flood Protection Board for construction activities that will occur within the floodplain. A review of the State Water Resources Control Board (SWRCB) Geotracker database and



California Department of Toxic Substances (DTSC) EnviroStor database found no known cleanup sites within three miles of the project area.

### **DISCUSSION**

- a) *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

**Less than Significant Impact.** The project would involve the use of heavy equipment for the grading, filling, and hauling of materials. Such equipment may require the use of common materials that have hazardous properties, e.g., petroleum-based fuels. These materials would be used in accordance with all applicable laws and regulations and, if used properly, would not pose a significant hazard to the public or environment. All refueling of construction vehicles and equipment would occur within designated areas and the use of hazardous materials within the project area would be temporary. Therefore, the project would have a less than significant impact.

- b) *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

**Less than Significant Impact.** The project would involve ground disturbance and excavation within the project area. With any project conducting ground disturbance, there is a potential for unknown contaminants or accident conditions involving the release of hazardous materials into the environment, as well as upset or accident related to machinery. A review of the SWRCB Geotracker database and DTSC EnviroStor database found no known hazardous materials site or hazardous materials cleanup sites within three miles of the project area. Therefore, it is unlikely for the project to have the potential of unknown contaminants or accidents due to excavation. Additionally, hazards and hazardous waste BMP **HAZ-1** would require the project to prepare a Spill Prevention, Control, and Countermeasure Plan (SPCCP) prior to construction, which will include BMPs regarding proper handling of hazardous materials and clean-up procedures in the event of an accidental release. Therefore, the project would have a less than significant impact.

- c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

**No Impact.** There are no schools located within one-quarter mile of the project site. Therefore, no impact would occur.

- d) *Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

**No Impact.** A review of the SWRCB Geotracker database and DTSC EnviroStor database found no known hazardous materials site or hazardous materials cleanup sites within three miles of the project area. Therefore, the project would not create a significant hazard to the public or the environment by being located on a known hazardous waste site, and no impact would occur.

- e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

**No Impact.** The project is not located within an airport land use plan or within two miles of a public airport or public use airport. Therefore, the project would not result in a safety hazard or excessive noise for people residing or working in the project area, and no impact would occur.

- f) *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

**No Impact.** There is no known adopted emergency response plan or emergency evacuation plan within the project area. Therefore, the project would not impair implementation of or physically interfere with any emergency plan, and no impact would occur.

- g) *Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

**No Impact.** The project would not occur with a designated wildland area, or where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. Therefore, the project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and no impact would occur.

#### ***BEST MANAGEMENT PRACTICES***

**HAZ-1:** The project proponent or project contractor shall prepare a Spill Prevention, Control, and Countermeasure Plan (SPCCP) prior to the commencement of construction activities. The SPCCP shall include information on the nature of all hazardous materials that shall be used on-site. The SPCCP shall also include information regarding proper handling of hazardous materials and clean-up procedures in the event of an accidental release. The phone number of the agency overseeing hazardous materials and toxic clean-up shall be provided in the SPCCP.

#### ***FINDINGS***

The project would have a **Less than Significant Impact** relating to hazards and hazardous materials.

## 2.10 HYDROLOGY AND WATER QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(iv) impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### REGULATORY SETTING

#### Federal Regulations

The Clean Water Act (CWA) was enacted as an amendment to the Federal Water Pollutant Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to waters of the U.S. The CWA serves as the primary Federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The CWA empowers the U.S. EPA to set national water quality standards and effluent limitations, and to include programs addressing both point-source and non-point-source pollution. Point-source pollution originates or enters surface waters at a single, discrete location, such as an outfall structure or an excavation or construction site. Non-point-source pollution originates over a broader area and includes urban contaminants in storm water runoff and sediment loading from upstream areas. The CWA operates on the principle that all discharges into the nation's waters are unlawful unless they are specifically authorized by a permit; permit review is CWA's primary regulatory tool.

The USACE regulates discharges of dredged or fill material into waters of the U. S. These waters include wetlands and non-wetland bodies of water that meet specific criteria, including a direct or indirect connection to interstate commerce. USACE regulatory jurisdiction pursuant to Section 404 of the CWA is founded on a connection, or nexus, between the water body in question and interstate commerce. This connection may be direct (through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce) or may be indirect (through a nexus identified in USACE regulations).

The RWQCB has jurisdiction under Section 401 of the CWA and regulates any activity which may result in a discharge to surface waters. Typically, the areas subject to jurisdiction of the RWQCB coincide with those of USACE (i.e., waters of the U.S. including any wetlands). The RWQCB also asserts authority over “waters of the state” under waste discharge requirements pursuant to the Porter-Cologne Water Quality Control Act.

On April 21, 2020, the U.S. EPA and the USACE published the “Navigable Waters Protection Rule” to redefine the extent of waters of the United States, and CWA jurisdiction. Under the final rule, four categories of water are federally regulated under: the territorial seas and traditional navigable waters; perennial and intermittent tributaries to those waters; certain lakes, ponds, and impoundments; and wetlands adjacent to jurisdictional waters. The final rule also detailed 12 categories of exclusions or features that are not considered “waters of the United States” which includes features that only contain water in direct response to rainfall (e.g., ephemeral features); groundwater; many ditches; prior converted cropland; and waste treatment systems.

### **State Regulations**

#### **Porter-Cologne Water Quality Act**

Also known as the California Water Code, the Porter-Cologne Water Quality Act, was created in 1969 to govern water quality regulation in California, and to protect water quality as well as beneficial uses of water. The Porter-Cologne Act applies to all waters of the state, including surface water, groundwater, and wetlands at both point and non-point sources of pollution. The act established the overarching California State Water Resources Control Board and nine semiautonomous Regional Water Boards. The Porter-Cologne Act requires the adoption of water quality control plans that give direction to managing water pollution in California. Usually, basin plans get adopted by the Regional Water Boards and are updated when needed. The plans incorporate the beneficial uses of the waters of the state and then provide objectives that should be met in order to maintain and protect these uses.

#### **State Wetland Definition and Procedures for Discharges of Dredged or Fill Materials to Waters of the State**

In response to the U.S. EPA and USACE “Navigable Waters Protection Rule” and reduction in water quality protections under CWA jurisdiction, the SWRCB adopted the “State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State” (Procedures). On April 6, 2021, the SWRCB adopted the Procedures for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets the wetland definition is a water of the state; 3) wetland delineation procedures; and 4) procedures for the submittal, review and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities.

According to the SWRCB, the Procedures were adopted to address several important issues:

- strengthening protection of waters of the state that are no longer protected under the CWA since those waters of the state have historically relied on CWA protections in dredged or fill discharge permitting practices;
- inconsistency across the Regional Water Boards in requirements for discharges of dredged or fill material into waters of the state, including wetlands;
- no single accepted definition of wetlands at the state level;
- the Regional Water Boards may have different requirements and levels of analysis with regard to the issuance of water quality certification; and,

- current regulations have not been adequate to prevent losses in the quantity and quality of wetlands in California, where there have been especially profound historical losses of wetlands.

## **AFFECTED ENVIRONMENT**

### **Hydrology**

Hydrological resources within the BSA include Dry Creek and associated drainages. Water flows in a north-south orientation toward Dry Creek, where flows encounter the Dry Creek North Levee.

### **Groundwater**

Seasonal groundwater level data was reviewed through the Groundwater Information Center Interactive Map Web Application (<https://gis.water.ca.gov/app/gicima/>) provided by the California DWR. Within the project area, groundwater depths range from 10 to 60 feet below ground surface elevation. General groundwater depth may be influenced by local pumping, rainfall, and irrigation patterns. The project area occurs within the Sacramento Valley groundwater basin and the Sacramento Valley – South Yuba Subbasin. The South Yuba Subbasin is defined by the Yuba River to the north, Feather River to the west, and Bear Creek to the south.

### **Flooding**

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) the majority of the project area is within FEMA Zone A, designated as a Special Flood Hazard Area subject to inundation by the 1% annual chance of flood, with a small portion classified as Zone X that is subject to inundation by the 0.2 % annual chance flood hazard. The project site occurs at an elevation of approximately 55-70 feet above mean sea level (See Appendix B).

## **DISCUSSION**

- Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

**Less than Significant Impact.** The project would disturb an area greater than one acre; therefore, an NPDES Construction General Permit is required, consistent with Construction General Permit Order No. 2009-009-DWQ, issued by the SWRCB to address storm water runoff. The permit would address grading, clearing, grubbing, and disturbances to the ground such as stockpiling or excavation. This permit would also require RD 817 to prepare and implement an SWPPP with the intent of keeping all products of erosion from moving off-site into receiving waters. The Construction General Permit (which includes the SWPPP) develops BMPs to prevent construction pollutants from entering storm water runoff. By complying with the NPDES Construction General Permit, preparing the project-specific SWPPP requirements, and following the storm water BMPs provided in the SWPPP. Hydrology and water quality BMP **HYD-1** would require the project to obtain the necessary NPDES permit and prepare the SWPPP. Therefore, project effects would be less than significant.

- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?*

**No Impact.** The project would provide repairs to two pipes deemed “Urgent – Pipe Integrity Issue” by the DWR at Gibbs Pond and 40 Mile Road in order to maintain adequate drainage of irrigation and storm water flows from the north side of the Dry Creek Levee to Dry Creek. The project does not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project might impede sustainable groundwater management. Therefore, no impact would occur.

- c) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:*
- (i) *result in substantial erosion or siltation on- or off-site;*
  - (ii) *substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;*
  - (iii) *create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
  - (iv) *impede or redirect flood flows?*

**Less than Significant Impact.** The project would provide repairs to two pipes deemed “Urgent – Pipe Integrity Issue” by the DWR at Gibbs Pond and 40 Mile Road in order to maintain adequate drainage of irrigation and storm water flows from the north side of the Dry Creek Levee to Dry Creek. The project would not alter existing drainage patterns, including the course of a stream or river, and no addition of impervious surfaces would occur. The project would not increase the rate of surface water flow but would return the facility to its original flow regime. This incremental increase from current flow to original flows is not anticipated to result in substantial erosion or siltation, or to substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Additionally, the project is not anticipated to create or contribute runoff water that would exceed the capacity of Dry Creek or provide substantial additional sources of polluted runoff. The repaired pipes would not impede or redirect flood flows. Therefore, project effects would be considered less than significant.

- d) *Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?*

**No Impact.** The project is located within a FEMA Special Flood Hazard Area; however, construction of the project would occur outside of the flood season. Additionally, as a pipe repair project, the operation of the project would have no risk for release of pollutants due to project inundation. Therefore, no impact would occur.

- e) *Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

**No Impact.** The project would not conflict or obstruct a water quality control plan or sustainable groundwater management plan. Therefore, no impact would occur.

### ***BEST MANAGEMENT PRACTICES***

**HYD-1:** The project shall obtain a NPDES Construction General Permit consistent with Construction General Permit Order No. 2009-009-DWQ issued by the SWRCB. The permit would address grading, clearing, grubbing, and disturbances to the ground such as stockpiling or excavation. The permit would also require the project proponent or project contractor to prepare and implement an approved SWPPP with the intent of keeping all products of erosion from moving off-site into receiving waters.

### ***FINDINGS***

The project would have a **Less than Significant Impact** on hydrology and water quality. Incorporation of BMP **HYD-1** would require compliance with federal and state water quality control requirements, including sediment and erosion control BMPs to further reduce effects to hydrology and water quality resources.



## 2.11 LAND USE AND PLANNING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### DISCUSSION

a) *Would the project physically divide an established community?*

**No Impact.** The project would provide repairs to two pipes deemed “Urgent – Pipe Integrity Issue” by the DWR at Gibbs Pond and 40 Mile Road. The project would not physically divide an established community. Therefore, no impact would occur.

b) *Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

**No Impact.** The project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, no impact would occur.

### FINDINGS

The project would not physically divide an established community or conflict with any land plan, policy, or regulation. Therefore, the project would have **No Impact** relating to land use and planning.

## 2.12 MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### DISCUSSION

- a) *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*

**No Impact.** According to the *Yuba County General Plan* (2011), the project area does not occur within a known mineral resource deposit that would be of value to the region and the residents of the state. Therefore, the project would not result in the loss of availability of a known mineral resource, and no impact would occur.

- b) *Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?*

**No Impact.** The project area does not occur within an identified locally-important mineral resource recovery site delineated with the *Yuba County General Plan* (2011), specific plan, or other land use plan. Therefore, the project would not result in the loss of availability of a known mineral resource recovery site, and no impact would occur.

### FINDINGS

The project would have **No Impact** relating to mineral resources.

## 2.13 NOISE

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### AFFECTED ENVIRONMENT

Noise-sensitive land uses generally include those uses where exposure to noise would result in adverse effects, as well as uses where quiet is an essential element of their intended purpose. The Yuba County General Plan (2011) defines noise-sensitive land uses as schools, hospitals, rest homes, long-term care facilities, mental care facilities, residences, and other similar land uses. The project area is within an agricultural land use area within Yuba County, and motor vehicles traveling on 40 Mile Road and agricultural equipment in adjacent fields are the primary contributors to the existing noise environment at the project site. Noise-sensitive land uses near the project area include one residential home situated approximately 600 feet from the project site.

### DISCUSSION

- a) *Would the project cause generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

**Less than Significant.** During construction, noise from equipment would cause short-term localized increases in ambient noise levels. The actual noise levels at any particular location would depend on a variety of factors, including the type of construction equipment or activity involved, distance to the source of the noise, obstacles to noise that exist between the receptor and the source, time of day, and similar factors. Construction of the proposed project would result in a temporary, periodic increase in ambient noise levels. However, this increase would be temporary, intermittent, and limited to daytime hours. The single residence located 600 feet from project activities may experience periods of nuisance noise; however, at distances over 500 feet, typical construction equipment noise levels would dissipate well below thresholds set by the Yuba County General Plan "Maximum Allowable Noise Exposure from Non-Transportation Noise Source" (Table Public Health and Safety 2). The project would have no operational noise impacts. Therefore, the project would not be considered to generate a substantial temporary or permanent increase in ambient noise levels established by Yuba County in relation to noise-sensitive receptors, and the project would have a less than significant impact.

- b) *Would the project exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

**No Impact.** Groundborne vibration would increase temporarily during construction activities including excavation and other ground disturbances. However, the project would not expose persons to or generate excessive groundborne vibrations or groundborne noise levels. Therefore, no impact would occur.

- c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

**No Impact.** The project is not located within the vicinity of a private airstrip or an airport land use plan and is not within two miles of a public airport or public use airport. Therefore, the project would not expose people residing or working in these areas to excessive noise levels, and no impact would occur.

### ***FINDINGS***

The project would cause temporary construction-related nuisance noise; however, these levels would be below Yuba County General Plan threshold. Therefore, the project would have a **Less than Significant Impact** relating to Noise.

## 2.14 POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### REGULATORY SETTING

CEQA also requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "...discuss the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."

### DISCUSSION

- a) *Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

**No Impact.** The project would provide repairs to two pipes deemed "Urgent – Pipe Integrity Issue" by the DWR at Gibbs Pond and 40 Mile Road. Therefore, the project would not induce population growth, directly or indirectly, and no impact would occur.

- b) *Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?*

**No Impact.** The project would provide repairs to two pipes deemed "Urgent – Pipe Integrity Issue" by the DWR at Gibbs Pond and 40 Mile Road. The project is not in a residential area nor are there residential units in the project area. The project would not displace any existing housing or necessitate the construction of replacement housing elsewhere, and no impact would occur.

### FINDINGS

The project would have **No Impact** relating to population or housing.

## 2.15 PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### DISCUSSION

- a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: fire protection, police protection, schools, parks, and/or other public facilities?*

**No Impact.** The project is located in rural Yuba County, which consists of agricultural lands, and the project would have no effect on fire protection, police protection, schools, parks, or other public facilities. Therefore, no impact would occur.

### FINDINGS

The project would have **No Impact** relating to public services.



## 2.16 RECREATION

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### DISCUSSION

- a) *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

**No Impact.** The project is located in rural Yuba County, which consists solely of agricultural lands and where no existing neighborhood and regional parks or other recreational facilities occur. The project would not increase the use of existing parks or other recreational facilities due to the location and nature of the project, and no impact would occur.

- b) *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

**No Impact.** The project does not include recreational facilities, nor requires the construction or expansion of other recreational facilities, and no impact would occur.

### FINDINGS

The project would have **No Impact** relating to recreation.

## 2.17 TRANSPORTATION/TRAFFIC

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### DISCUSSION

- a) *Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

**No Impact.** The project would provide repairs to two pipes deemed “Urgent – Pipe Integrity Issue” by the DWR at Gibbs Pond and 40 Mile Road. The project would have no transportation elements and would not be a part of the transportation network. Therefore, the project would not conflict with a program, plan, ordinance or policy addressing the circulation system, and no impact would occur.

- b) *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

**No Impact.** The project is not a transportation project and would not conflict with CEQA Guidelines section 15064.3. No impact would occur.

- c) *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*

**No Impact.** The project is not a transportation project and would not increase hazards due to a geometric design feature. Therefore, no impact would occur.

- d) *Would the project result in inadequate emergency access?*

**No Impact.** The project would have no effect on emergency access. No impact would occur.

### FINDINGS

The project would have **No Impact** relating to transportation/traffic.

## 2.18 TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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### REGULATORY SETTING

Effective July 1, 2015, CEQA was revised to include early consultation with California Native American tribes and consideration of TCRs. These changes were enacted through Assembly Bill 52 (AB 52). By including TCRs early in the CEQA process, AB 52 intends to ensure that local and tribal governments, public agencies, and project proponents would have information available, early in the project planning process, to identify and address potential adverse impacts to TCRs. CEQA now establishes that a “project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment” (PRC § 21084.2).

To help determine whether a project may have such an adverse effect, the PRC requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. The consultation must take place prior to the determination of whether a negative declaration, a mitigated negative declaration, or an environmental impact report is required for a project (PRC § 21080.3.1). Consultation must consist of the lead agency providing formal notification, in writing, to the tribes that have requested notification or proposed projects within their traditionally and culturally affiliated area. AB 52 stipulates that the NAHC shall assist the lead agency in identifying the California Native American tribes that are traditionally and culturally affiliated within the project area. If the tribe wishes to engage in consultation on the project, the tribe must respond to the lead agency within 30 days of receipt of the formal notification. Once the lead agency receives the tribe’s request to consult, the lead agency must then begin the consultation process within 30 days. If a lead agency determines that a project may cause a substantial adverse change to TCRs, the lead agency must consider measures to mitigate that impact. Consultation concludes when either: 1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a TCR, or 2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC § 21080.3.2). Under existing law, environmental documents must not include information about the locations of an archaeological site or sacred lands or any other information that is exempt from public disclosure pursuant to the Public Records Act. TCRs are also exempt from disclosure. The term “tribal cultural resource” refers to the following:

Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are one of the following:

- Included or determined to be eligible for inclusion in the California Register of Historical Resources

- Included in a local register of historical resources as defined in subdivision (k) of the PRC Section 5020.1.
- A resource determined by a California lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of the PRC Section 5024.1.

### ***AFFECTED ENVIRONMENT***

Located within California's Sacramento Valley at an elevation of 55-70 ft. amsl the project is situated in a predominately rural landscape marked by extensive agricultural areas and relatively little development. A product of the pre-reclamation seasonal flooding of the Bear River that deposited layer upon layer of alluvial sediments, the flat terrain and fertile soils in the area are conducive to crop cultivation. The project lays approximately 5 miles northeast of the confluence of the Bear River and the Feather River.

The project APE includes all design elements and activities as outlined above in Section 1.4, sufficiently buffered to provide for adequate construction workspaces, access, and an equipment and/or material staging area. Construction access would be via 40 Mile Road and the Dry Creek north levee access road. Construction staging would occur within the APE on adjacent private property or on top of the Dry Creek north levee. No new road construction or maintenance of existing roads will occur outside the APE. No utilities will require relocation as part of the project.

With most of the project activity occurring at or adjacent the Dry Creek north levee, the project APE extends approximately 3,250 ft. along this feature. In all, the APE, which is consistent with the project area, amounts to approximately 8.3 acres (see Figure 3. Project Features). The vertical APE for the project varies at the two locations with a maximum depth of excavation of 24 feet at Gibb's Pond and 18 feet at Forty Mile Road.

### ***DISCUSSION***

- a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)*

**Less than Significant with Mitigation.** Efforts to identify TCRs in the APE included a search of site records and inventory reports on file at North Central Information Center (NCIC), background archival research including reviews of historic plats, imagery, etc., consultation with Native American groups, and an intensive pedestrian surface survey. On May 14, 2021, Dokken Engineering archaeologist, Michelle Campbell, conducted a pedestrian surface survey of the entire APE. The surface survey was conducted via controlled transects spaced at no greater than 5-meter (16-foot) intervals within and along the proposed APE corridor encapsulating the pipe repair locations and levee top access road, as well as all other project prescribed elements involving potential ground disturbance. No prehistoric artifacts, archaeological features, or anthropogenic soils were observed within the APE as a result of the pedestrian survey.

On April 13, 2021, Dokken Engineering sent a letter and a map depicting the project vicinity to the NAHC, asking the commission to review the Sacred Lands File for any Native American cultural resources that might be affected by the project. The request to the NAHC sought to identify any Native American cultural resources within or adjacent to the project area. A list of Native American individuals who might have information or concerns about the project was also requested. On May 11, 2021, the NAHC informed Dokken Engineering via email that a search of the Sacred Lands File was completed with negative results.

To help determine whether the project may have an effect, PRC Section 21080.3.1 requires the CEQA lead agency to consult with any California Native American tribe that requests consultation and is traditionally

and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the release of a negative declaration, mitigated negative declaration.

On July 22, 2021, initial consultation letters were mailed (and where possible e-mailed) to the Native American tribal governments who have previously submitted a written request to RD 817 requesting to be notified of projects within their traditionally and culturally affiliated area, pursuant to PRC Section 21080.3.1. The letters provided a summary of the project and requested information regarding comments or concerns the tribal governments might have about the project and whether any traditional cultural properties, TCRs, or other resources of significance would be affected by implementation of the project. Letters were sent to the following tribal governments: Mechoopda Indian Tribe, the Mooretown Rancheria of Maidu Indians, the Tsi Akim Maidu, the UAIC, and the Wilton Rancheria. No responses from the Mechoopda Indian Tribe or the Wilton Rancheria have been received. Following is a summary of responses received:

***Mooretown Rancheria of Maidu Indians***

Matthew Hatcher, Tribal Historic Preservation Officer, responded to the initial project letter in an 8/10/2021 dated letter stating that the Mooretown Rancheria is not aware of any known cultural resources on the project site. Mr. Hatcher requested that the Mooretown Rancheria be contacted if any new information or human remains are found, as they have a process to protect such important and sacred artifacts (especially near rivers or streams). The project should contact Mr. Hatcher or current THPO if any new information or discoveries are made.

***UAIC***

Anna Starkey, Cultural Regulatory Specialist for the UAIC, responded that the UAIC believes the project area is sensitive for Native American cultural resources. As such, they provided several mitigation measures regarding tribal monitoring during construction, treatment protocols regarding discovery of Native American resources during construction, and worker awareness training.

At this time, no TCRs that are listed or eligible for listing in the CRHR, or in a local register of historical resources are known to exist with the project APE. Therefore, no further archaeological study is recommended unless project plans change to include areas not previously included in the APE or a greater amount of ground disturbance. With the findings discussed above, TCRs are not anticipated to be discovered. However, with any project, there is always the possibility that unknown TCRs may be encountered during construction. With the implementation of **MM-TCR-1** through **MM-TCR-5**, potential impacts from the project would be considered less than significant with mitigation.

- b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

**Less than Significant with Mitigation.** As discussed in subsection (a) above, Dokken Engineering, in coordination with RD 817 as the CEQA lead agency, conducted Native American consultation efforts pursuant to PRC Section 2108.3.1. Consultation efforts determined that the UAIC believe the project area is sensitive for Native American cultural resources. As such, they provided several mitigation measures regarding tribal monitoring during construction, treatment protocols regarding discovery of Native American resources during construction, and worker awareness training.

With the implementation of **MM-TCR-1** through **MM-TCR-5**, potential impacts from the project would be considered less than significant with mitigation.

### ***MITIGATION MEASURES***

Based on a request from the UAIC and as the potential for TCRs to be present within the APE, the following mitigation measures will be incorporated into the project:

**MM TCR-1:** Cultural Resource Sensitivity Training shall be provided to all personnel working at the project site and shall be provided by both an archaeologist and a Native American representative familiar with the project area. The UAIC have developed a Tribal Cultural Resource brochure which will be provided to all personnel as part of the Cultural Resource Sensitivity Training. The training will include relevant information regarding archaeological and Tribal Cultural Resources, applicable regulations, and protocols for avoidance, as well as consequences for violating State and Federal laws and regulations. The training will also provide archaeological and Tribal Cultural Resources discovery notification and treatment protocol. RD 817 will negotiate a contract with the UAIC to provide these services.

**MM TCR-2:** A minimum of seven days prior to beginning any ground disturbing activities for the project, Reclamation District 817 will notify the UAIC with the proposed construction schedule. The UAIC will provide a Tribal Monitor or UAIC Tribal Representative to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days of initial ground disturbing activities. RD 817 will negotiate a contract with the UAIC to provide these services.

**MM TCR-3:** If any cultural resources are discovered during construction of the project, all work must be halted within 100 feet of the discovery until a qualified archaeologist can determine the significance of the discovery and implement any protection or mitigation measures. The no work buffer can be augmented or reduced, upon recommendation of the archaeologist. No work can resume until the archaeologist provides authorization.

**MM TCR-4:** If any Native American cultural resources are discovered during construction of the project, all work must be halted within 100 feet of the discovery and the current Tribal Historic Preservation Officer of the Mooretown Rancheria and the UAIC shall be contacted to determine the significance of the discovery. The Mooretown Rancheria and the UAIC shall provide recommendations on preferred treatment of the discovery. The no work buffer can be augmented or reduced, upon recommendation of the Mooretown Rancheria and UAIC. Work at the discovery location cannot resume until all investigation and significance evaluation of the discovery has been completed under both CEQA and Section 106 of the National Historic Preservation Act.

**MM TCR-5:** If human remains are encountered, State Health and Safety Code Section 7050.5 dictates that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.



### ***FINDINGS***

No TCRs have been identified through a records search, a pedestrian survey, and Native American Consultation. Incorporation of **MM TCR-1** through **MM TCR-5** into the project would ensure that the project would have a less than significant impact with mitigation relating to TCRs.

## 2.19 UTILITIES AND SERVICE SYSTEMS

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### AFFECTED ENVIRONMENT

The project area consists of the existing pipe locations and the area necessary to complete construction activities for implementation of the project. No other utilities or service systems are within the project area.

### DISCUSSION

- a) *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

**Less than Significant Impact.** The project would replace the existing failed pipes at Gibbs Pond and 40 Mile Road with a new drainage pipe facility. The replacement of the failed pipes would prevent further degradation of the pipes and the Dry Creek Levee embankment and improve functionality of the facility. Specifically, the replacement project would prevent further levee embankment voids, pipe corrosion, backflow issues, control water volume losses and improve drainage and storm water flows to Dry Creek, reducing the risk of flood and the damages caused by flooding. Therefore, the project would be considered to have a less than significant impact.

- b) *Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

**No Impact.** The project would not result in the need for new or expanded water supplies.

- c) *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

**No Impact.** The project would not include the construction of any wastewater-generating uses, and no impact to wastewater service or capacity would occur.

- d) *Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

**No Impact.** Construction activities may generate small amounts of solid waste; however, this amount would not be in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. The construction contractor would be required to dispose of all solid waste at an appropriate waste disposal facility or landfill, and no impact would occur.

- e) *Would the project comply with federal, state, and local statutes and regulations related to solid waste?*

**No Impact.** The project would comply with all federal, state, and local statutes and regulations related to solid waste, and no impact would occur.

### ***FINDINGS***

The project would have a **Less than Significant Impact** to utilities and service systems.

## 2.20 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones:

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### DISCUSSION

- a) *Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*

**No Impact.** There is no known adopted emergency response plan or emergency evacuation plan within the project area. Therefore, the project would not substantially impair any emergency plan and no impact would occur.

- b) *Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

**No Impact.** The project would not exacerbate wildfire risks due to slope, prevailing winds, or other factors. No impact would occur.

- c) *Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

**No Impact.** The project would not require infrastructure that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. No impact would occur.

- d) *Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

**No Impact.** The project would replace the existing degraded and failed pipes at Gibbs Pond and 40 Mile Road. The project would not expose people or structures to downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes.

### FINDINGS

The project would have **No Impact** relating to wildfire.

## 2.21 MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### DISCUSSION

- a) *Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

**Less Than Significant.** Based upon the review and analysis of potential adverse effects to the environment provided in this Initial Study, including the project-specific mitigation measures, the proposed project would not substantially degrade the overall quality of the environment within the project area.

With respect to Section 2.3 Air Quality, Section 2.4 Biological Resources, Section 2.5 Cultural Resources, Section 2.7 Geology and Soils, Section 2.10 Hydrology and Water Quality, and Section 2.18 Tribal Cultural Resources, implementation of the proposed project has the potential to result in temporary construction-related disturbance of environmental resources. However, feasible project-specific mitigation measures are identified to minimize and avoid potential adverse effects. Although the presence of the new pipe repairs would be permanent, the project is not anticipated to cause significant impacts.

For those areas where the potential for significant impacts exists, the implementation of mitigation measures would ensure that the project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, this impact is considered **Less than Significant**.

- b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

**Less than Significant.** Cumulative environmental effects are multiple individual effects that, when considered together, would be considerable or compound or increase other environmental impacts. Individual effects may result from a single project or a number of separate projects and may occur at the same place and point in time or at different locations and over extended periods of time.

The project would have no impact on Aesthetics, Agriculture and Forest Resources, Energy, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, Transportation/Traffic, and Wildfire. Therefore, there would be no cumulative effects to these resource categories.

According to the analyses provided in this Initial Study, the project would have no operational effects to any resource categories. However, temporary construction activities related to the project would cause a less than significant impact, or a less than significant impact with mitigation, for the remaining CEQA checklist resource categories. Since construction activities are short-term and localized, construction activities would not combine in such a way that a significant cumulative effect could occur to these resource categories. In addition, feasible project-specific mitigation measures would avoid or minimize potential contributions to cumulative environmental impacts. Consequently, the project would not have impacts that are individually limited, or cumulatively considerable, and this impact would be **Less than Significant**.

- c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

**Less than Significant.** Based on the nature and scope of the project (i.e., temporary construction activities and no operation phase) and the analysis provided in this Initial Study, the project would not result in direct or indirect substantial adverse effects on human beings. Temporary construction activities would have potential effects to human health during project implementation, including temporary changes to air quality, noise quality, and transport of hazardous materials. These potential impacts to human beings would be temporary; they have been evaluated and found to be less than significant or less than significant with mitigation. No substantial direct or indirect adverse effects on human beings would occur; the impact would be **Less than Significant**.

## ***FINDINGS***

The project would have a **Less than Significant** effect relating to the potential to substantially degrade the quality of the environment, impacts that are individually limited but cumulatively considerable, and environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly. Therefore, there are no significant determinations for mandatory findings of significance.



### **3.0 Comments and Coordination**

This chapter summarizes RD 817's efforts to identify, address and resolve project-related issues through early and continuing coordination.

#### **3.1 CONSULTATION AND COORDINATION WITH PUBLIC AGENCIES**

Consultation and/or coordination with the following agencies was, or will be, initiated for the project:

- California Department of Fish and Wildlife
- California Office of Emergency Services
- Federal Emergency Management Agency
- U.S. Fish & Wildlife Service
- U.S. Army Corps of Engineers
- Regional Water Quality Control Board
- Central Valley Flood Protection Board

#### **3.2 PUBLIC PARTICIPATION**

The public comment period for the project will occur from December 1, 2021, to December 31, 2021. All written comments received by RD 817 will be incorporated into the Final Initial Study/Mitigated Negative Declaration and added in an appendix. Any additions or corrections to the IS/MND subsequent to public comments will be addressed within the final document.

## **4.0 Distribution List**

A Notice of Availability was prepared and posted with the Yuba County Clerk Recorders Office, and Appeal-Democrat local newspaper online. Additionally, the following agencies and interested parties were notified (unless IS hardcopies specified).

### **Federal Government**

U.S. Army Corps of Engineers, Sacramento District  
ATTN: Regulatory Branch  
1325 J Street, Room 1480  
Sacramento, CA 95814-2922

U.S. Army Corps of Engineers, Sacramento District  
ATTN: 408 Division  
1325 J Street, Room 1480  
Sacramento, CA 95814-2922

### **State Government**

California State Clearinghouse  
P.O. Box 3044  
Sacramento, CA 95812-3044  
(IS hardcopy)

Central Valley Regional Water Quality Control Board  
11020 Sun Center Drive, Suite 200  
Rancho Cordova, CA 95670

California Department of Fish and Wildlife  
North Central Region (Region 2)  
1701 Nimbus Road  
Rancho Cordova, CA 95670

### **Local Agencies**

Yuba County Clerk-Recorder  
915 8th Street #107  
Marysville, CA 95901

## **5.0 List of Preparers**

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### **MBK Engineers**

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### **Reclamation District 817**

Joe Conant, President

## 6.0 References

CARB 2018. California Air Resources Board. California Air Basin Map. Available at: <https://ww3.arb.ca.gov/ei/maps/statemap/abmap.htm>

CDC 2021a. Department of Conservation. California Important Farmland Finder. Available at: <https://maps.conservation.ca.gov/DLRP/CIFF/>

CDC 2021b. Department of Conservation. Farmland Mapping & Monitoring Program. Available at: <https://www.conservation.ca.gov/dlrp/fmmp>

CDC 2015. Department of Conservation. 2015 Fault Activity Map of California. Available at: <https://maps.conservation.ca.gov/cgs/fam/>

DTSC 2021. Department of Toxic Substances Control. EnviroStor. Available at: <https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=sutter+county>

Dokken Engineering 2021a. Gibbs Pond and 40 Mile Road Pipe Repair Project - Biological Resources Report. July 2021.

Dokken Engineering 2021b. Gibbs Pond and 40 Mile Road Pipe Repair Project – Aquatic Resource Delineation Report. July 2021.

Dokken Engineering 2021c. Gibbs Pond and 40 Mile Road Pipe Repair Project – Cultural Resources Inventory Report. July 2021.

FRAQMD 2021. Feather River Air Quality Management District. Available at: <https://www.fraqmd.org/>

SWRCB 2021. State Water Resources Control Board. GeoTracker. Available at: <https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=sutter+county>

SWRCB 2019. State Water Resources Control Board. Impaired Water Bodies. Available at: [https://www.waterboards.ca.gov/water\\_issues/programs/tmdl/integrated2014\\_2016.shtml](https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml)

UCMP 2021. University of California Museum of Paleontology Vertebrate Specimen Search for Yuba County. Berkeley, CA. Retrieved June 4, 2021, from <http://ucmpdb.berkeley.edu>.

Yuba County 2030 General Plan. Adopted 2011. Available at: [https://www.yuba.org/departments/community\\_development/planning\\_department/general\\_plan.php](https://www.yuba.org/departments/community_development/planning_department/general_plan.php)

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## **Appendix A:**

# **Roadway Construction Emissions Model Results**

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Daily Emission Estimates for -> RD817 Gibbs Pond and 40 Mile Road Pipe Repair Project															
Project Phases (Pounds)		ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing		0.20	3.26	2.25	2.19	0.09	2.10	0.52	0.08	0.44	0.01	501.00	0.16	0.00	506.44
Grading/Excavation		0.41	5.33	5.55	2.30	0.20	2.10	0.62	0.18	0.44	0.01	789.59	0.25	0.01	797.94
Drainage/Utilities/Sub-Grade		2.00	19.23	15.67	2.90	0.80	2.10	1.23	0.80	0.44	0.03	3,096.02	0.18	0.02	3,107.57
Paving		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum (pounds/day)		2.00	19.23	15.67	2.90	0.80	2.10	1.23	0.80	0.44	0.03	3,096.02	0.25	0.02	3,107.57
Total (tons/construction project)		0.02	0.20	0.17	0.05	0.01	0.04	0.02	0.01	0.01	0.00	31.89	0.00	0.00	32.06
Notes: Project Start Year -> 2022															
Project Length (months) -> 2															
Total Project Area (acres) -> 0															
Maximum Area Disturbed/Day (acres) -> 0															
Water Truck Used? -> Yes															
		Total Material Imported/Exported Volume (yd³/day)		Daily VMT (miles/day)											
Phase		Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck								
Grubbing/Land Clearing		1040	0	0	0	0	0								
Grading/Excavation		4,051	0	0	0	0	0								
Drainage/Utilities/Sub-Grade		640	0	0	0	0	0								
Paving		0	0	0	0	0	0								
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.															
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.															
CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.															
Total Emission Estimates by Phase for -> RD817 Gibbs Pond and 40 Mile Road Pipe Repair Project															
Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)		ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	PM10 (tons/phase)	PM10 (tons/phase)	PM10 (tons/phase)	PM2.5 (tons/phase)	PM2.5 (tons/phase)	PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing		0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00	0.00	1.01
Grading/Excavation		0.00	0.05	0.05	0.02	0.00	0.02	0.01	0.00	0.00	0.00	6.95	0.00	0.00	6.37
Drainage/Utilities/Sub-Grade		0.02	0.15	0.12	0.02	0.01	0.02	0.01	0.01	0.00	0.00	23.84	0.00	0.00	21.71
Paving		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum (tons/phase)		0.02	0.15	0.12	0.02	0.01	0.02	0.01	0.01	0.00	0.00	23.84	0.00	0.00	21.71
Total (tons/construction project)		0.02	0.20	0.17	0.05	0.01	0.04	0.02	0.01	0.01	0.00	31.89	0.00	0.00	29.09
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.															
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.															
CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1, 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.															
The CO2e emissions are reported as metric tons per phase.															



## **Appendix B:**

# **Biological Technical Reports**

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# **Reclamation District 817 Gibbs Pond and 40 Mile Road Pipe Repair Project**



## **Biological Resources Report**

### **Prepared for:**

Reclamation District No. 817  
P.O. Box 261  
Wheatland, CA 95692

### **Prepared by:**

Dokken Engineering  
110 Blue Ravine Road, Suite 200  
Folsom, CA 95630

**July 2021**

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## List of Acronyms

BSA	Biological Study Area
Cal-IPC	California Invasive Plant Council
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG	California Fish and Game
CFR	Code of Federal Regulations
CMP	Corrugated metal pipe
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CWA	Clean Water Act
DPS	Distinct Population Segment
DBH	Diameter at breast height
DWR	Department of Water Resources
EFH	Essential Fish Habitat
EO	Executive Order
ESA	Environmentally Sensitive Area
ESU	Evolutionarily Significant Unit
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FSRP	Flood System Repair Projects
IPaC	Information for Planning and Consultation
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	Ordinary High Water Mark
Project	Gibbs Pond and 40 Mile Road Pipeline Repair Project
RD	Reclamation District
RWQCB	Regional Water Quality Control Board
SSC	Species of Special Concern
U.S.	United States
U.S.C.	United States Code
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

# 1. Introduction

Reclamation District (RD) 817 proposes to complete the Gibbs Pond and 40 Mile Road Pipe Repair Project (Project), which would involve the replacement of two gravity-flow pipes that provide storm drain and irrigation drainage through the northern levee of Dry Creek in Yuba County, California. The Project is located where 40 Mile Road crosses the Dry Creek north levee approximately 2.75 miles east of State Route 70 and 3 miles west of the Town of Wheatland. The Project is within Section 11, Township 13 North, Range 4 East of the Mount Diablo Meridian within the United States Geological Survey (USGS) 7.5-minute quadrangles Sheridan and Nicolaus (**Figure 1. Project Vicinity; Figure 2. Project Location**). This Biological Resources Report is a summary of the biological resources, protective measures for sensitive resources, and mitigation associated with the Project.

## 1.1 Project Description

817 proposes to replace two gravity-flow pipes that provide storm drain and irrigation drainage through the northern levee of Dry Creek in Yuba County, California. The project is located where 40 Mile Road crosses the Dry Creek north levee approximately 2.75 miles east of State Route 70 and 3 miles west of the Town of Wheatland. The Gibbs Pond and 40 Mile Road Pipe Repair Project (project) will be funded with a combination of local funds (provided by the RD 817 through a grant agreement with Yuba Water Agency) and an existing project agreement between the RD and the Department of Water Resources (DWR) under the Flood System Repair Program (FSRP).

Both pipes that this project intends to replace have failed and present flood risk to the residents of Wheatland. The inspection report for the pipe at 40 Mile Road indicates voids in the pipe within the levee embankment. In addition, locations along the pipe have exposed fill. DWR has classified this pipe as “Urgent – Pipe Integrity Issue.” The inspection report for the pipe at Gibbs Pond indicates corrosion within the pipe and specifically at the outlet. Additionally, there is a section of pipe on the water side of the levee that is missing, which allows water to be able to flow backwards towards the landside of the levee. The pipe currently drains a much larger volume of water than originally intended. This pipe is also identified as “Urgent – Pipe Integrity Issue.”

The following improvements are proposed for the pipe at 40 Mile Road:

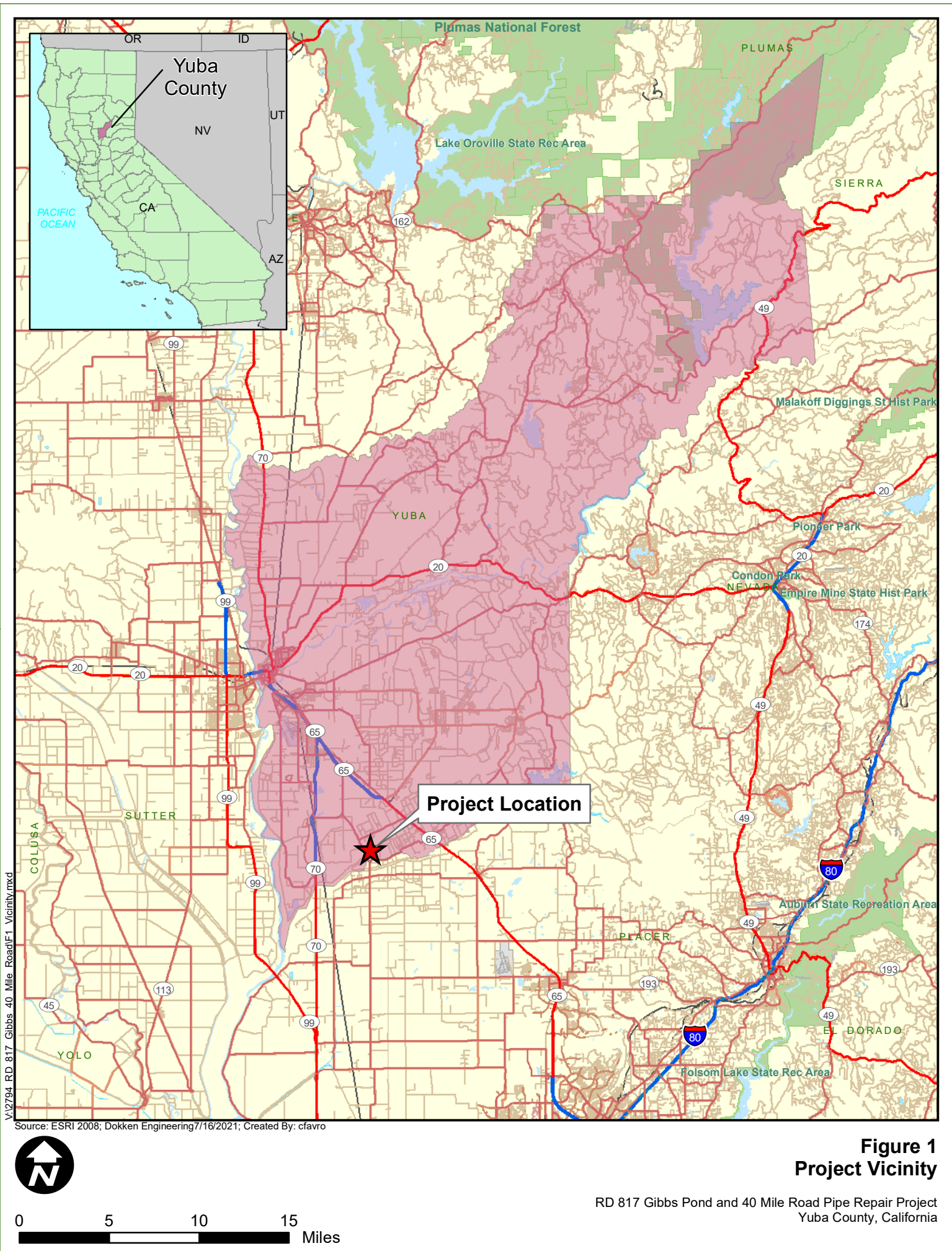
- The existing 18-inch diameter corrugated metal pipe (CMP) would be abandoned in place. This pipe currently crosses under both 40 Mile Road and the Dry Creek levee. The intake is located north of the levee and west of 40 Mile Road and the outfall is located south of the levee and east of 40 Mile Road. The existing pipe would be capped/plugged at both ends and filled with low pressure flowable grout until the pipe has been completely filled, preventing water from draining through the pipe after construction is completed.
- A new 18-inch diameter welded steel pipe would be constructed under the Dry Creek levee on a different alignment as the existing pipe. The new pipe would have a similar intake location but would run roughly parallel to 40 Mile Road with the outfall proposed to be located south of the levee and west of 40 Mile Road. The new pipe would allow gravity flow drainage and would include a flap gate which can be closed to prevent irrigation waters from draining during the irrigation season. The flap gate will not allow flows during high water through the pipe to inundate the landside of the Dry Creek levee.

- Construction of the new 18-inch pipe would be accomplished by de-grading the existing levee section to the proposed pipe profile, installing the new pipe, then backfilling and compacting with original levee material and clean import fill from off-site. A designated degrade stockpile area would be located directed adjacent to grading activities. Import fill is expected to be needed due to volume loss associated with compaction. Import fill type will be assessed in field to ensure soil compatibility (to avoid a seepage block condition) within the embankment.
- Grading between the new pipe outfall and the bank of Dry Creek would occur to provide channelization for the drainage flow to prevent erosion.

The following improvements are proposed for the pipe at Gibbs Pond:

- The existing 24-inch diameter CMP and associated gate structures will be removed and replaced within the existing project footprint with a new 24-inch diameter welded steel pipe. The new pipe would allow gravity flow drainage and would include a flap gate which can be closed to prevent irrigation waters from draining during the irrigation season. The flap gate will not allow flows during high water through the pipe to inundate the landside of the Dry Creek levee.
- Removal of the old pipe and construction of the new 24-inch pipe would be accomplished by de-grading the existing levee section to the proposed pipe profile, installing the new pipe, concrete gate well, sluice gate, associated inlet and outlet headwalls, flap gates, and then backfilling and compacting with original levee material and clean import fill from off-site. A designated degrade stockpile area would be located approximately 600-feet east of the degrade area directly adjacent to the project. Import fill is expected to be needed due to volume loss associated with compaction. Import fill type will be assessed in field to ensure soil compatibility (to avoid a seepage block condition) within the embankment.

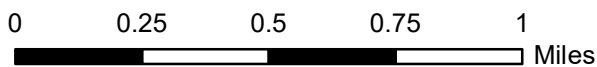
The project would be accessed via a designated access/haul route along the levee crown Hoffman-Plumas Road. The project is not expected to require permanent acquisition of any property; however, construction easements will be needed from adjacent property owners and an encroachment permit will be obtained from the Central Valley Flood Protection Board for construction activities that will occur within the floodplain. Construction staging would occur on adjacent private property or on top of the Dry Creek Levee.



**Figure 1**  
**Project Vicinity**



Source: ESRI World Street Maps Online; Dokken Engineering 7/16/2021; Created By: cfavro



**Figure 2**  
**Project Location**  
RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California



## **2. Study Methods**

### **2.1 Regulatory Requirements**

This section describes the general federal, state, and local plans, policies, and laws that are relevant to biological resources within the Project area. Applicable approvals that could be required before construction of the Project are provided in Chapter 5.

#### **2.1.1 Federal Regulations**

##### *2.1.1.1 National Environmental Policy Act*

The National Environmental Policy Act (NEPA) provides an interdisciplinary framework for environmental planning by federal agencies and contains action-forcing procedures to ensure that federal agency decision makers take environmental factors into account. NEPA applies when a federal agency proposes an action, grants a permit, or agrees to fund or otherwise authorize any other entity to undertake an action that could possibly affect environmental resources. The Federal Emergency Management Agency (FEMA) is the designated NEPA lead agency for this Project.

##### *2.1.1.2 Federal Endangered Species Act*

The Federal Endangered Species Act (FESA) of 1973 (16 United States Code (U.S.C.) section 1531 et seq.) provides for the conservation of endangered and threatened species listed pursuant to Section 4 of the Act (16 U.S.C. section 1533) and the ecosystems upon which they depend. These species and resources have been identified by the United States Fish and Wildlife Service (USFWS).

##### *2.1.1.3 Clean Water Act*

The Clean Water Act (CWA) was enacted as an amendment to the Federal Water Pollutant Control Act of 1972, which outlined the basic structure for regulating discharges of pollutants to Waters of the United States (U.S.) The CWA serves as the primary Federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. The CWA empowers the U.S. Environmental Protection Agency to set national water quality standards and effluent limitations, and includes programs addressing both point-source and non-point-source pollution. Point-source pollution originates or enters surface waters at a single, discrete location, such as an outfall structure or an excavation or routine maintenance site. Non-point-source pollution originates over a broader area and includes urban contaminants in storm water runoff and sediment loading from upstream areas. The CWA operates on the principle that all discharges into the nation's waters are unlawful unless they are specifically authorized by a permit; permit review is CWA's primary regulatory tool.

The Regional Water Quality Control Board (RWQCB) has jurisdiction under Section 401 of CWA and regulates any activity which may result in a discharge to surface waters. Typically, the areas subject to jurisdiction of the RWQCB coincide with those of the United States Army Corps of Engineers (USACE; i.e., waters of the U.S. including any wetlands). The RWQCB also asserts authority over "waters of the State" under waste discharge requirements pursuant to the Porter-Cologne Water Quality Control Act.

#### *2.1.1.4 Executive Order 13112: Prevention and Control of Invasive Species*

Executive Order (EO) 13112 (signed February 3, 1999) directs all federal agencies to prevent and control introductions of invasive species in a cost-effective and environmentally sound manner. The EO requires consideration of invasive species in the NEPA analyses, including their identification and distribution, their potential impacts, and measures to prevent or eradicate them.

#### *2.1.1.5 Executive Order 13186: Migratory Bird Treaty Act*

EO 13186 (signed January 10, 2001) directs each Federal agency, taking actions that could adversely affect migratory bird populations, to work with USFWS to develop a Memorandum of Understanding that will promote the conservation of migratory bird populations. Protocols developed under the Memorandum of Understanding will include the following agency responsibilities:

- Avoid and minimize, to the maximum extent practicable, adverse impacts on migratory bird resources when conducting agency actions;
- Restore and enhance habitat of migratory birds, as practicable; and
- Prevent or abate the pollution or detrimental alteration of the environment for the benefit of migratory birds, as practicable.

The EO is designed to assist Federal agencies in their efforts to comply with the Migratory Bird Treaty Act (MBTA; 50 Code of Federal Regulations (CFR) 10 and 21) and does not constitute any legal authorization to take migratory birds. Take is defined under the MBTA as “the action of or attempt to pursue, hunt, shoot, capture, collect, or kill” (50 CFR 10.12) and includes intentional take (i.e., take that is the purpose of the activity in question) and unintentional take (i.e., take that results from, but is not the purpose of, the activity in question).

#### *2.1.1.6 Magnuson-Stevens Fishery Conservation and Management Act*

The Magnuson-Stevens Fishery Conservation and Management Act of 1976 was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the U.S., by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

### **2.1.2 State Regulations**

#### *2.1.2.1 California Environmental Quality Act*

The California Environmental Quality Act (CEQA) is a California state law created to inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities and to work to reduce these negative environmental impacts. RD 817 is the CEQA lead agency for this Project.



#### 2.1.2.2 California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Game (CFG) Code Section 2050 et seq.) requires the California Department of Fish and Wildlife (CDFW) to establish a list of endangered and threatened species (Section 2070) and to prohibit the incidental taking of any such listed species except as allowed by the Act (Sections 2080-2089). In addition, CESA prohibits take of candidate species (under consideration for listing).

CESA also requires CDFW to comply with CEQA (Pub. Resources Code Section 21000 et seq.) when evaluating incidental take permit applications (CFG Code Section 2081(b) and California Code Regulations, Title 14, section 783.0 et seq.), and the potential impacts the project or activity, for which the application was submitted, may have on the environment. CDFW's CEQA obligations include consultation with other public agencies which have jurisdiction over the project or activity (California Code Regulations, Title 14, Section 783.5(d)(3)). CDFW cannot issue an incidental take permit if issuance would jeopardize the continued existence of the species (CFG Code Section 2081(c); California Code Regulations, Title 14, Section 783.4(b)).

#### 2.1.2.3 Section 3503 and 3503.5: Bird and Raptors

CFG Code Section 3503 prohibits the destruction of bird nests and Section 3503.5 prohibits the killing of raptor species and destruction of raptor nests.

#### 2.1.2.4 Section 3513: Migratory Birds

CFG Code Section 3513 prohibits the take or possession of any migratory non-game bird as designated in the MBTA or any part of such migratory non-game bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

## 2.2 Studies Required

### 2.2.1 Literature Search

Literature searches were conducted to obtain species lists from the USFWS, CDFW, California Native Plant Society (CNPS), and National Marine Fisheries Service (NMFS) which contain all species known to occur or that may occur within the Project vicinity that are state or federally listed as threatened, endangered, or candidate, and species which are otherwise listed as species of special concern by other special interest groups. Database searches returned 19 listed wildlife species and six listed plant species which may occur within the Project vicinity. The potential for these species to occur within the Project area itself is assessed in Section 3.2.

### 2.2.2 Survey Methods

Surveys conducted for the Project included a general biological survey, a tree survey, and mapping of the Ordinary High Water Mark (OHWM) of jurisdictional water features. Survey methods for the general biological survey included walking meandering transects through the Project's Biological Study Area (BSA), defined as the Project area necessary for all Project activities, plus an additional 20-foot buffer to accommodate for staging and access and any potential changes to Project design (**Figure 3. Project Features**).

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Project Area

Biological Study Area

Project Features

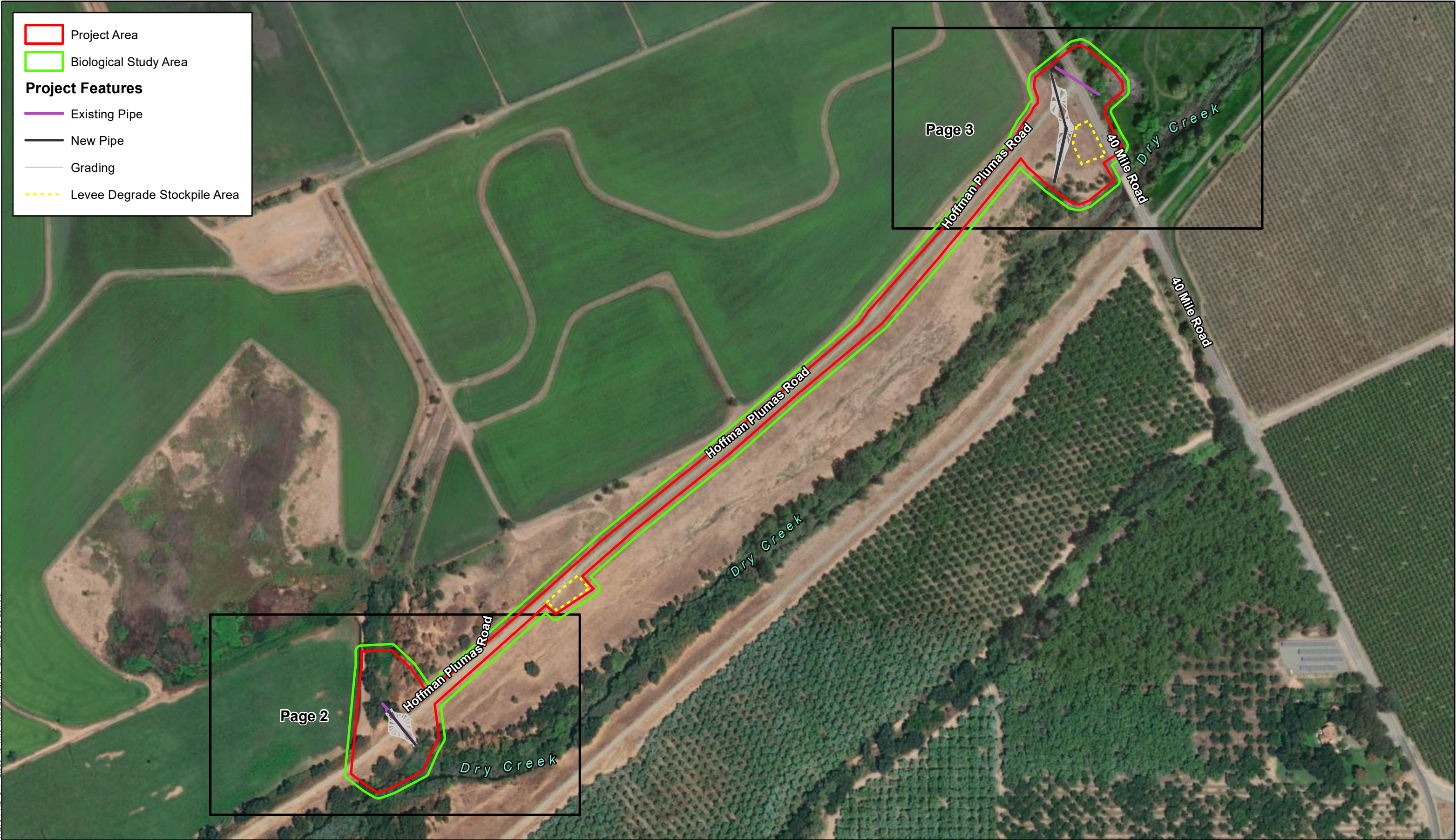
Existing Pipe

New Pipe

Grading

Levee Degrade Stockpile Area

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Source: ESRI Maps Online; Dokken Engineering 7/16/2021; Created By: cfavro

N

1 inch = 300 feet

0

300

600

900

1,200

1,500

Feet

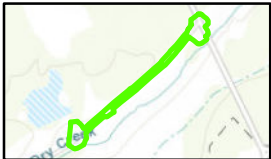


Figure 3

Project Features

Page 1 of 3

RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project

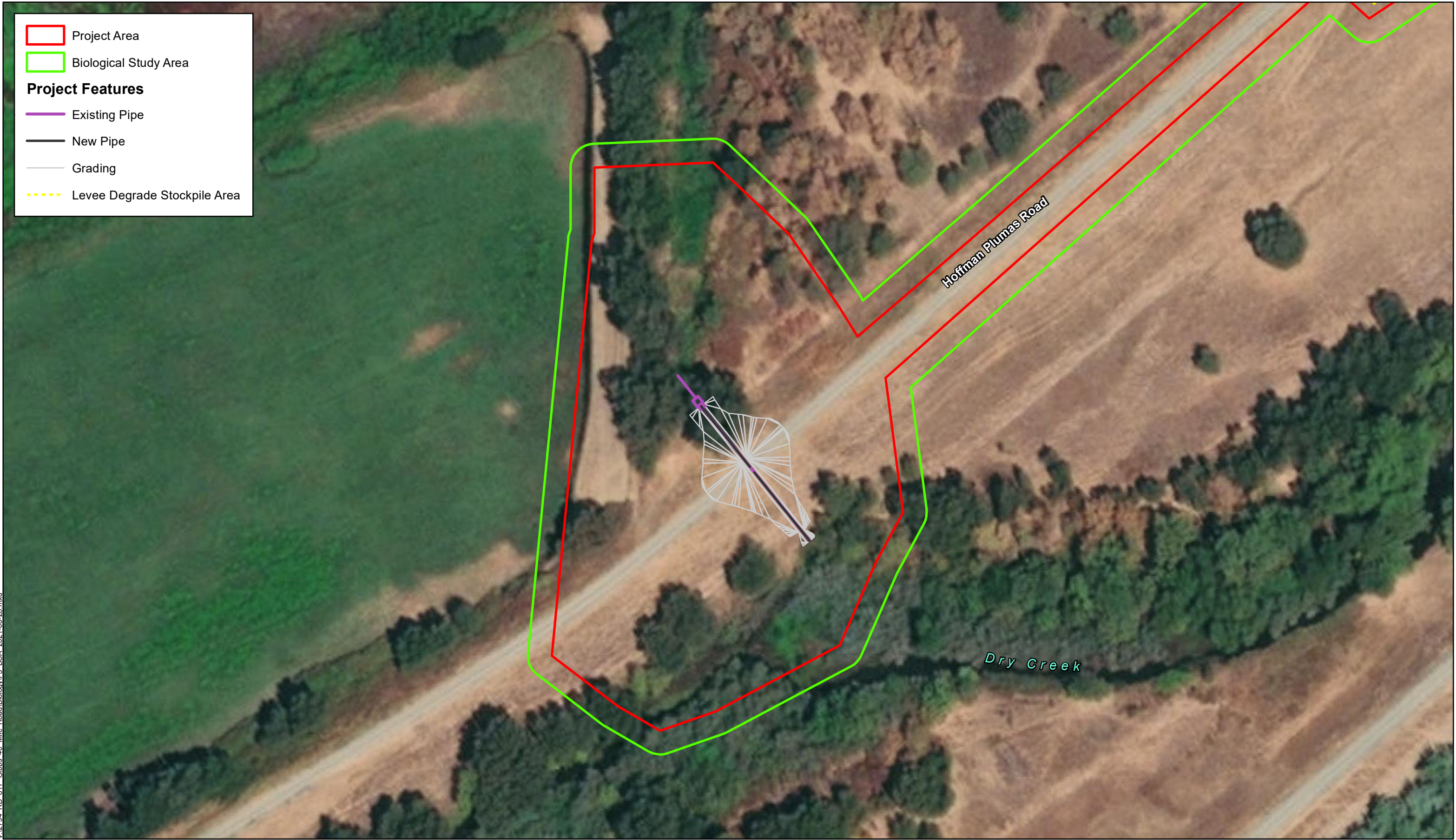
Yuba County, California







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Source: ESRI Maps Online; Dokken Engineering 7/16/2021; Created By: cfavro



1 inch = 75 feet



**Figure 3**  
**Project Features**  
**Page 2 of 3**  
RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California







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Source: ESRI Maps Online; Dokken Engineering 7/16/2021; Created By: cfavro



1 inch = 75 feet



**Figure 3**  
**Project Features**  
**Page 3 of 3**  
RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California





The surveying biologists observed all plant and wildlife species present within the BSA at the time of the survey and classified habitat types within the BSA. The tree survey was conducted by mapping, recording, and measuring the diameter at breast height (DBH) of each tree within the Project BSA (**Appendix A. Tree Survey Memorandum**). The OHWM of Dry Creek, the only jurisdictional water of the State and of the U.S. identified within the BSA, was mapped in the field according to the USACE A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (Lichvar & McColley 2008).

## 2.3 Personnel and Survey Dates

Biological surveys, OHWM delineations, and tree surveys were conducted on April 21, 2021 by Dokken Engineering biologists Scott Salembier and Clare Favro.

## 2.4 Agency Coordination and Professional Contacts

### 2.4.1 United States Fish and Wildlife Service

On April 19, 2021, a shapefile of the Project area was utilized to obtain a species list from the USFWS Information for Planning and Consultation (IPaC) species list generator tool (USFWS 2021; **Appendix B. USFWS Species List**).

### 2.4.2 California Department of Fish and Wildlife

On April 19, 2021, a species list was obtained from the CDFW California Natural Diversity Database (CNDDDB) using a four-quad search of the USGS 7.5-minute quadrangles Sheridan, Nicolaus, Wheatland, and Olivehurst (CDFW 2021; **Appendix C. CDFW Species List**).

### 2.4.3 California Native Plant Society

On April 19, 2021, a species list was obtained from the CNPS Inventory for Rare and Endangered Plants using a four-quad search of the USGS 7.5-minute quadrangles Sheridan, Nicolaus, Wheatland, and Olivehurst (CNPS 2021; **Appendix D. CNPS Species List**).

### 2.4.4 National Marine Fisheries Service

On May 3, 2021, a species list was obtained from the NMFS West Coast Region species list tool for the USGS 7.5-minute quadrangle Sheridan (NMFS 2021; **Appendix E. NMFS Species List**).

## 2.5 Limitations That May Influence Results

Sensitive wildlife species with the potential to occur in the BSA may be cryptic (difficult to detect) or transient, migratory species. The population size and locations of sensitive species may fluctuate through time. Because of this, the data collected for this report represents a “snapshot” in time and may not reflect actual future conditions.

The collection of biological field data is normally subject to environmental factors that cannot be controlled or reliably predicted. Consequently, the interpretation of field data must be conservative and consider the uncertainties and limitations imposed by the environment. However, due to the experience and qualifications of the consulting biologists involved in the surveys, this limitation is not expected to severely influence the results or substantially alter the findings.

No additional limitations were present that could influence the results of this document. All surveys were conducted during appropriate weather and temperature conditions.

### 3. Results: Environmental Setting

The BSA is within the Sacramento Valley bioregion of the Great Central Valley region of the California Floristic Province (Jepson 2021). This bioregion is predominately agricultural, with grasslands, marshes, vernal pools, riparian woodlands, alkali sink vegetation, and valley oak woodlands throughout. It has slightly cooler, wetter conditions than its southern counterpart, the San Joaquin Valley. Weather conditions include warm, dry summers and cool, wet winters. The average annual high temperature of the region is 76 degrees Fahrenheit and the average annual low is 49 degrees Fahrenheit. The average annual precipitation is approximately 22 inches in the form of rain (U.S. Climate Data 2021).

#### 3.1 Description of the Existing Physical and Biological Conditions

##### 3.1.1 Study Area

The Project's BSA was defined as the area necessary for all Project activities, plus an additional 20-foot buffer to accommodate for staging and access and any potential changes to Project design. The BSA is approximately 12.03 acres in area.

##### 3.1.2 Physical Conditions

###### 3.1.2.1 Soils

Soils within the BSA are variable, consisting of sandy, loamy soils that are poorly to well drained. According to the Natural Resources Conservation Service (NRCS), the specific soil types within the BSA are as follows:

- Columbia fine sandy loam, 0 to 1 percent slopes, frequently flooded,
- San Joaquin loam, 0 to 1 percent slopes, and
- San Joaquin loam, 0 to 1 percent slopes, occasionally flossed.

In addition, the NRCS reports that some of the BSA is covered by water and a soil type is not reported for this area (NRCS 2021; **Appendix F. NRCS Soil Report**).

###### 3.1.2.2 Topography

The natural topography of the BSA is relatively flat, with the exception of human-built roads, which are constructed on raised levees for flood safety and control purposes. The elevation of the BSA ranges from approximately 55 to 70 feet above mean sea level. Topographical features within and immediately adjacent to the BSA include Dry Creek, Hoffman Plumas Road, and 40 Mile Road.

##### 3.1.3 Biological Conditions

###### 3.1.3.1 Wildlife

Wildlife observed within the BSA during biological surveys included locally common bird species typical of riparian and agricultural habitats, such as acorn woodpecker (*Melanerpes formicivorus*), California scrub-jay (*Aphelocoma californica*), and killdeer (*Charadrius vociferus*). In addition to

these common species, one special-status species, Swainson's hawk (*Buteo swainsoni*), was observed soaring over the BSA. Furthermore, species such as pacific chorus treefrog (*Pseudacris sierra*) and white-tailed deer (*Odocoileus virginianus*) were observed within and adjacent to the BSA (**Table 1. Wildlife Species Observed**). Due to the availability of aquatic and natural vegetation resources within the BSA, as well as its location along a potentially important habitat connectivity corridor, there is a potential for many other locally common wildlife species to utilize the area as a refuge from the nearby human development and for its natural resources.

**Table 1. Wildlife Species Observed**

Common Name	Scientific Name	Native (N)/Non-Native (X)
<b>40 Mile Road</b>		
Acorn woodpecker	<i>Melanerpes formicivorus</i>	N
Brown-headed cowbird	<i>Molothrus ater</i>	N
California scrub-jay	<i>Aphelocoma californica</i>	N
Cliff swallow	<i>Petrochelidon pyrrhonota</i>	N
Indian peafowl	<i>Pavo cristatus</i>	X
Killdeer	<i>Charadrius vociferus</i>	N
Mourning dove	<i>Zenaida macroura</i>	N
Red-winged blackbird	<i>Agelaius phoeniceus</i>	N
Swainson's hawk	<i>Buteo swainsoni</i>	N
Western kingbird	<i>Tyrannus verticalis</i>	N
<b>Gibbs Pond</b>		
California scrub-jay	<i>Aphelocoma californica</i>	N
Pacific chorus treefrog	<i>Pseudacris sierra</i>	N
Turkey vulture	<i>Cathartes aura</i>	N
Western kingbird	<i>Tyrannus verticalis</i>	N
White-tailed deer	<i>Odocoileus virginianus</i>	N

### 3.1.3.2 Natural Vegetation Communities

#### Annual Grassland

Annual grassland habitat is composed of a variety of annual grass species, the majority of which are non-native and invasive. Such species observed within the BSA include foxtail barley (*Hordeum murinum*), Italian ryegrass (*Festuca perennis*), ripgut brome (*Bromus diandrus*), and soft chess (*Bromus hordeaceus*). In addition to grasses, this habitat type supports numerous forbs such as lthuriel's spear (*Triteleia laxa*), hawkbit (*Leontodon saxatilis*), Italian thistle (*Carduus pycnocephalus*), and field bindweed (*Convolvulus arvensis*; **Table 2. Plant Species Observed; Figure 4. Land Cover Types within the Biological Study Area; Appendix G. Representative Photographs**). Annual grassland habitat makes up 7.53 acres of the BSA (~63%).

#### Riparian

Riparian habitat occurs within the BSA along the edges of Dry Creek and adjacent to the unnamed drainage channel. Riparian vegetation within the BSA is characterized as a denser, mesic set of trees, shrubs, and forbs associated with a nearby aquatic resource. Within this habitat, plant species such as narrow leaf willow (*Salix exigua*), poison oak (*Toxicodendron diversilobum*), and curly dock (*Rumex crispus*) can be found. Riparian vegetation is an important habitat component, as it supports a wide diversity of plant and wildlife species and acts as a key part of habitat connectivity and migratory corridors. Riparian habitat covers approximately 1.02 acres (~8%) of the BSA.



Biological Study Area (~12.03 acres)

Annual Grassland (~7.53 acres)

Riparian (~1.02 acres)

Remnant Oak Woodland (~0.78 acres)

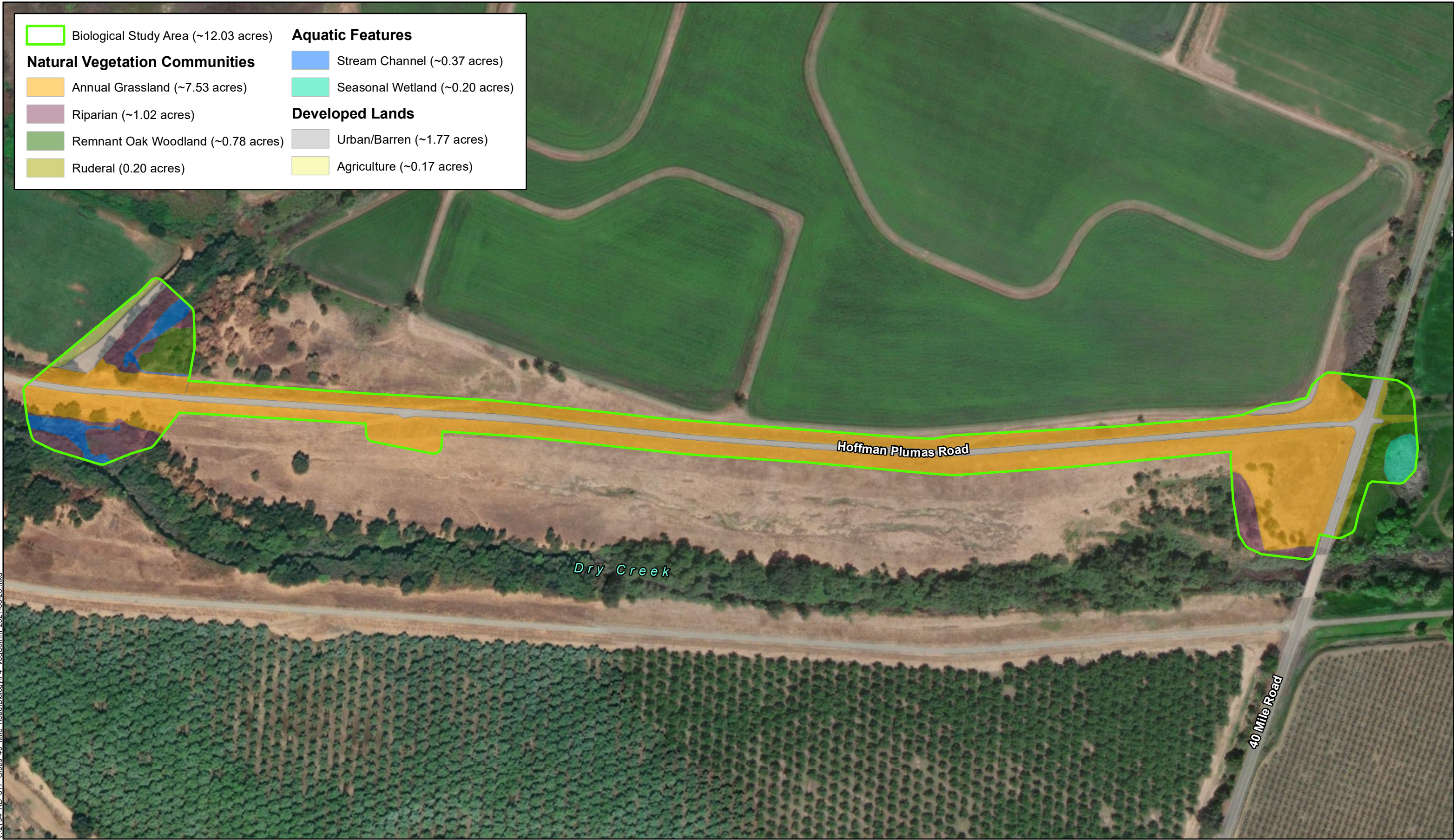
Ruderal (0.20 acres)

Stream Channel (~0.37 acres)

Seasonal Wetland (~0.20 acres)

Urban/Barren (~1.77 acres)

Agriculture (~0.17 acres)



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Source: ESRI Maps Online; Dokken Engineering 7/16/2021; Created By: cfavro



Figure 4

Land Cover Types within the Biological Study Area

RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project

Yuba County, California





### Remnant Oak Woodland

Small patches of remnant oak woodland habitat occur within the BSA. This habitat type is recognizable by a canopy of valley oak (*Quercus lobata*) and interior live oak (*Q. wislizeni*) and an understory with shrubby species such as Himalayan blackberry (*Rubus armeniacus*). Within the BSA, oak woodland is marginal and disturbed, likely remnants from the oak woodlands that would have dominated the landscape prior to the area's agricultural development. Remnant oak woodland encompasses approximately 0.78 (~6%) of the BSA.

### Ruderal

Ruderal vegetation occurs within the BSA along the edges of 40 Mile Road, where weedy grasses and forbs occur in between the margins of developed and natural habitat types. Such species include blessed milk thistle (*Silybum marianum*), Italian thistle, and cutleaf geranium (*Geranium dissectum*). Ruderal vegetation covers approximately 0.20 acres (~2% of the BSA).

**Table 2. Plant Species Observed**

Common Name	Scientific Name	Native (N)/Non-Native (X) [Cal-IPC Invasive Rating]
<b>40 Mile Road</b>		
<b>Herbs</b>		
Blessed milk thistle	<i>Silybum marianum</i>	X [limited]
Blue dicks	<i>Dipterostemon capitatus</i>	N
California mugwort	<i>Artemisia douglasiana</i>	N
Canada horseweed	<i>Erigeron canadensis</i>	N
Curly dock	<i>Rumex crispus</i>	X [limited]
Cut leaf geranium	<i>Geranium dissectum</i>	X [limited]
Field bindweed	<i>Convolvulus arvensis</i>	X
Hairy vetch	<i>Vicia villosa</i>	X
Hawkbit	<i>Leontodon saxatilis</i>	X
Italian thistle	<i>Carduus pycnocephalus</i>	X [moderate]
Ithuriel's spear	<i>Triteleia laxa</i>	N
Longbeak stork's-bill	<i>Erodium botrys</i>	X
Mustard	<i>Brassica sp.</i>	X
Narrow leaf mule ears	<i>Wyethia angustifolia</i>	N
Poison hemlock	<i>Conium maculatum</i>	X [moderate]
Red stemmed filaree	<i>Erodium cicutarium</i>	X [limited]
Rose clover	<i>Trifolium hirtum</i>	X [limited]
Stinking chamomile	<i>Anthemis cotula</i>	X
Wall bedstraw	<i>Gallium parisiense</i>	N
Wild hyacinth	<i>Triteleia hyacinthina</i>	N
Wild radish	<i>Raphanus sativus</i>	X [limited]
<b>Grasses</b>		
Blue wild rye	<i>Elymus glaucus ssp. glaucus</i>	N
Foxtail barley	<i>Hordeum murinum</i>	X [moderate]
Foxtail brome	<i>Bromus madritensis</i>	X
Italian ryegrass	<i>Festuca perennis</i>	X [moderate]
Medusa head	<i>Elymus caput-medusae</i>	X [high]
Ripgut brome	<i>Bromus diandrus</i>	X [moderate]
Soft chess	<i>Bromus hordeaceus</i>	X [limited]
Wild oat	<i>Avena fatua</i>	X [moderate]
<b>Shrubs</b>		

Common Name	Scientific Name	Native (N)/Non-Native (X) [Cal-IPC Invasive Rating]
California wild rose	<i>Rosa californica</i>	N
Himalayan blackberry	<i>Rubus armeniacus</i>	X [high]
<b>Trees</b>		
Interior live oak	<i>Quercus wislizeni</i>	N
Narrow leaf willow	<i>Salix exigua</i>	N
Oregon ash	<i>Fraxinus latifolia</i>	N
Valley oak	<i>Quercus lobata</i>	N
<b>Gibbs Pond</b>		
<b>Herbs</b>		
Curly dock	<i>Rumex crispus</i>	X [limited]
Cut leaf geranium	<i>Geranium dissectum</i>	X [limited]
Field bindweed	<i>Convolvulus arvensis</i>	X
Hairy vetch	<i>Vicia villosa</i>	X
Italian thistle	<i>Carduus pycnocephalus</i>	X [moderate]
Longbeak stork's-bill	<i>Erodium botrys</i>	X
Ripwort plantain	<i>Plantago lanceolata</i>	X [limited]
Wall bedstraw	<i>Gallium parisiense</i>	N
Western ragweed	<i>Ambrosia psilostachya</i>	N
Wild teasel	<i>Dipsacus fullonum</i>	X [moderate]
<b>Grasses</b>		
California bulrush	<i>Schoenoplectus californicus</i>	N
Common rush	<i>Juncus effusus</i>	N
Foxtail barley	<i>Hordeum murinum</i>	X [moderate]
Italian ryegrass	<i>Festuca perennis</i>	X [moderate]
Medusa head	<i>Elymus caput-medusae</i>	X [high]
Mexican rush	<i>Juncus mexicanus</i>	N
Ripgut brome	<i>Bromus diandrus</i>	X [moderate]
Soft chess	<i>Bromus hordeaceus</i>	X [limited]
Wild oat	<i>Avena fatua</i>	X [moderate]
<b>Shrubs</b>		
California wild rose	<i>Rosa californica</i>	N
Himalayan blackberry	<i>Rubus armeniacus</i>	X [high]
Poison oak	<i>Toxicodendron diversilobum</i>	N
<b>Trees</b>		
Interior live oak	<i>Quercus wislizeni</i>	N
Narrow leaf willow	<i>Salix exigua</i>	N
Oregon ash	<i>Fraxinus latifolia</i>	N
Valley oak	<i>Quercus lobata</i>	N

### 3.1.3.3 Aquatic Features

#### Stream Channel

There are two instances of stream channel habitat within the BSA; Dry Creek and an unnamed intermittent stream channel. In total, stream channel habitat makes up approximately 0.37 acres (~3%) of the BSA.

Approximately 0.21 acres (390 linear feet) of Dry Creek are present within the BSA. Dry Creek is a natural stream channel, identified as Cowardin classification system R4SBC, an intermittent, seasonally flooded streambed within the riverine system by the National Wetlands Inventory (NWI; NWI 2021). Dry Creek has direct connectivity to Bear River approximately 1.2 miles

southwest of the BSA. Bear River is considered a traditional navigable water of the U.S. and with direct connectivity, Dry Creek would also be considered a jurisdictional water of the U.S., water of the State, and CDFW jurisdictional habitat.

In addition to Dry Creek, the BSA contains 0.16 acres (380 linear feet) of a small, unnamed drainage feature that is a tributary to Dry Creek. This unnamed stream channel is a small drainage channel with surface water originating at an existing pipe outfall location north of Hoffman Plumas Road. This channel is classified as Cowardin classification system R5UBFx by the NWI, indicating that it is an excavated semi permanently flooded, unknown perennial riverine channel with an unconsolidated bottom (NWI 2021). The unnamed channel is intermittent, appears to have been excavated in otherwise dry land, and serves as a drainage from Gibbs Pond (north of the BSA) into Dry Creek. As an intermittent stream with connectivity to the jurisdictional Dry Creek, this unnamed stream channel is considered a jurisdictional water of the U.S., water of the State, and CDFW jurisdictional habitat.

#### Seasonal Wetland

A small area of seasonal wetland was visually identified within the BSA near the 40 Mile Road pipeline location. The wetland is classified as PEM1C on the NWI, indicating a persistent, seasonally flooded wetland within a palustrine system with emergent vegetation present (NWI 2021). Seasonal wetland encompasses approximately 0.20 acres of the BSA (~2%).

#### **3.1.3.4 Developed Lands**

##### Urban/Barren

Urban and barren land within the BSA includes developed or compacted land that is devoid of vegetation. This consists of the paved roadways (40 Mile Road), gravel levee roads (Hoffman Plumas Road), and barren road shoulders adjacent to these areas. Urban and barren road covers approximately 1.77 acres (~15% of the BSA).

##### Agriculture

Agricultural land makes up the majority of the land use surrounding the BSA. Within the BSA itself, agriculture composes approximately 0.17 acres (~1% of the BSA). Agricultural fields in this area include rice fields, orchards, and grain crops. Agricultural land supports minimal native vegetation but can act as habitat for native wildlife species, particularly birds and small mammals. However, this land is regularly disturbed by human use and is not expected to provide pristine, preferred habitat for these species.

#### **3.1.4 Habitat Connectivity**

The BSA is within an area of terrestrial connectivity rank 4, representing a conservation planning linkage (CDFW 2021). This connectivity ranking indicates that the BSA is within an area that represents the best connection between core natural areas to maintain habitat connectivity, but is not an irreplaceable and essential corridor. Dry Creek and nearby Bear River provide this connectivity opportunity by supporting a riparian corridor that may connect the Feather River to the west to habitat in the Sierra Nevada foothills to the east. The BSA is located in a margin between agricultural fields and may serve as a movement corridor for wildlife traveling through the largely agricultural area.

### 3.2 Regional Species and Habitats and Natural Communities of Concern

Plant and wildlife species are considered to have special status if they have been listed as such by federal or state agencies or by one or more special interest groups, such as CNPS. In addition, habitats and natural communities are considered to be of special concern based on federal, state, or local laws regulating their development, limited distributions, and/or the habitat requirements of special status species occurring onsite. Database searches identified 19 special status or sensitive wildlife species and six special status or sensitive plant species with potential of occurring in the Project vicinity. A complete list of these species was compiled, along with discussion and determination of each species' potential of occurring within the BSA (**Table 3. Special Status Species Potentially Occurring in the Project Vicinity**). An analysis of habitat requirements, recorded observations, and field survey results determined that the following three species have a potential to occur within the BSA.

Low to Moderate Potential:

- Northern harrier (*Circus hudsonius*)
- Central Valley steelhead (*Oncorhynchus mykiss irideus* pop. 11)

High Potential:

- Swainson's hawk (*Buteo swainsoni*)

Table 3. Special Status Species Potentially Occurring in the Project Vicinity

Common Name	Species Name	Status <sup>1</sup>		General Habitat Description	Habitat Present <sup>2</sup>	Potential for Occurrence and Rationale
Amphibian Species						
California red-legged frog	Rana draytonii	State: Fed: CDFW:	T - SSC	Inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation. Associated with humid forests, woodlands, grasslands, coastal scrub, and streamsides. The species requires 11-20 weeks of permanent water for larval development and must have access to estivation habitat; estivation occurs from late summer to early winter. If wetlands are dry, requires animal burrows or other moist refuges. Occurs close to permanent and quiet stream pools, marshes, and ponds. Breeds from March to July in northern regions. Occurs from elevations near sea level to 5,200 feet.	A	Presumed Absent: The BSA is adjacent to Dry Creek but otherwise lacks permanent water sources. In addition, there are no documented CNDDB occurrences of the species within 10 miles of the BSA. Due to the lack of suitable breeding habitat and the lack of recent, nearby occurrences, the species is presumed absent.
Western spadefoot	Spea hammondi	State: Fed: CDFW:	- - SSC	Inhabits open areas with sandy or gravelly soils within mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Burrows underground from most of the year and is active above ground during rainfall. Requires vernal, shallow, temporary pools formed by heavy winter rains for reproduction. These pools must be free of bullfrogs, fish, and crayfish. Breeds from late winter to March.	A	Presumed Absent: The BSA lacks sandy and gravelly soils. In addition, it is surrounded by agricultural activities, which indicates a potential for pesticide use that would decrease the suitability of the habitat for amphibian species. There are no documented CNDDB occurrences of the species within 10 miles of the BSA, and due to the lack of suitable burrowing soils, it is presumed absent.



<b>Bird Species</b>						
Bank swallow	<i>Riparia riparia</i>	State: Fed: CDFW:	- T -	A migratory colonial nester inhabiting lowland and riparian habitats west of the deserts during spring through fall. Majority of current breeding populations occur along the Sacramento and Feather Rivers in the north Central Valley. Forages in grassland, brushland, wetlands, and cropland during migration. Requires vertical banks or cliffs with fine textured/sandy soils for nesting (tunnel and burrow excavations). Nests exclusively near streams, rivers, lakes, or the ocean. Breeds from May through July.	A	<b>Presumed Absent:</b> The BSA does contain riparian habitat; however, it lacks banks and cliffs for the species to utilize for nesting. There are a number of recent (2010) and historic occurrences of the species within the Project vicinity along the Feather River; however, these occurrences are, at closest, approximately 5 miles away from the BSA. Due to the lack of suitable nesting habitat and the pattern of nearby occurrences, the species is presumed absent from the BSA.
Northern harrier	<i>Circus hudsonius</i>	State: Fed: CDFW:	- - SSC	The species occurs from annual grassland up to lodgepole pine and alpine meadow habitats (0-10,000 feet). Found in meadows, grasslands, open rangelands, desert sinks, and fresh and saltwater emergent wetlands. Uses tall wetland grasses and forbs for cover and roosts on the ground in shrubby vegetation, usually at the edge of a marsh. Nests are made of a large mound of sticks or grasses. Mostly nests in emergent wetland or along rivers and lakes.	HP	<b>Low to Moderate Potential:</b> The BSA contains grassland habitat in proximity to Dry Creek and associated wetted areas. In addition, the riparian vegetation within the BSA may provide suitable cover for the species. The four CNDDDB occurrences of the species within the Project vicinity are from 2000 and located between 6 and 8 miles away from the BSA; however, with the presence of suitable habitat in the BSA, the species has a low to moderate potential to occur.
Swainson's hawk	<i>Buteo swainsoni</i>	State: Fed: CDFW:	- T -	Inhabits grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, alfalfa or grain fields that support a stable rodent prey base. Breeds March to late August.	HP	<b>High Potential:</b> The BSA contains grasslands and riparian vegetation in proximity to open agricultural fields, providing potentially suitable nesting and foraging habitat for the species. There are over 80 CNDDDB occurrences of the species within 10 miles of the BSA. Furthermore, the species was observed nesting within less than 0.1 mile of the BSA in 2004. More recent occurrences of the species (2015, 2016) are

						approximately 6 miles from the BSA, along the Feather River. Finally, during April 2021 biological surveys, one Swainson's hawk individual was observed soaring over the BSA. No direct evidence of the species nesting within the BSA was observed; however, due to the presence of suitable habitat, the many occurrences of the species, and the observation of the species passing through the BSA, the species has a high potential to occur.
Tricolored blackbird	<i>Agelaius tricolor</i>	State: Fed: CDFW:	- T SSC	Inhabits freshwater marsh, swamp, and wetland communities, but may utilize agricultural or upland habitats that can support large colonies, often in the Central Valley area. Requires dense nesting habitat that is protected from predators, is within 3-5 miles from a suitable foraging area containing insect prey and is within 0.3 miles of open water. Suitable foraging includes wetland, pastureland, rangeland, at dairy farms, and some irrigated croplands (silage, alfalfa, etc.). Nests in dense cattails, tules, willow, blackberry, wild rose, or tall herbs. Nests mid-March to early August but may extend until October or November in the Sacramento Valley region.	HP	<b>Presumed Absent:</b> The BSA includes a small wetland area that contains some cattails; however, this area is not large nor dense enough to support a colony of the species. The CNDDB does report recent (2015) breeding colonies with thousands of individuals of the species approximately 5 and 7 miles away from the BSA. However, no individuals have been observed at the site of the nearest occurrence (~1.3 miles away) since 2008. Due to the lack of habitat suitable to support a colony of the species and information available about the closest reported CNDDB occurrence, the species is presumed absent from the BSA.
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	State: Fed: CDFW:	T E -	Species inhabits riparian forests, along broad, lower flood bottoms of larger river systems. Nests in large blocks of riparian jungles often mixed with cottonwoods. Nesting appears to be preferred in riparian forest habitats with a dense understory; requires water near nesting site. Breeds June to August.	HP	<b>Presumed Absent:</b> The nearest reported CNDDB occurrence of the species is approximately 6 miles away from the BSA. Furthermore, individuals of the species have not been observed at this site since 1987. The BSA does contain some riparian habitat; however, due to the lack of recent, nearby

						occurrences, the species is presumed absent.
White-tailed kite	<i>Ellanus leucurus</i>	State: Fed: CDFW:	- - FP	Inhabits rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Prefers open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching. In southern California, will roost in saltgrass and Bermuda grass. Often found near agricultural lands. Nests are placed near the tops of dense oak, willow, or other tree stands. Breeds February through October.	A	<b>Presumed Absent:</b> The BSA does contain riparian trees and vegetation but lacks isolated, dense-topped trees preferred for nesting. Additionally, there is only one CNDDDB occurrence of the species within 10 miles of the Project vicinity, approximately 7 miles from the BSA (2003). Due to the lack of preferred nesting habitat and the lack of recent, nearby occurrences, the species is presumed absent from the BSA.
<b>Fish Species</b>						
Chinook salmon – Central Valley spring-run Evolutionarily Significant Unit (ESU)	<i>Oncorhynchus tshawtscha</i> pop. 11	State: Fed: CDFW:	T T -	Spring-run Chinook enter the Sacramento-San Joaquin River system to spawn, requiring larger gravel particle size and more water flow through their redds than other salmonids. Remaining runs occur in Butte, Mill, Deer, Antelope, and Beegum Creeks, tributaries to the Sacramento River. Known to occur in Siskiyou and Trinity counties.	EFH	<b>Presumed Absent:</b> The BSA is adjacent to Dry Creek, which is a tributary to the Bear River. Bear River is known to support fall-run Chinook salmon, but only occasionally, and the spring-run ESU has not been reported within this stream (Yoshiyama et al. 2001). Due to the current and historical range of the spring-run ESU, the species is presumed absent from the BSA.
Delta smelt	<i>Hypomesus transpacificus</i>	State: Fed: CDFW:	T E -	This species is endemic to California and can tolerate a wide range of salinity and temperatures but is most commonly found in brackish waters. Juveniles require shallow waters with food rich sources. Adults require adequate flow and suitable water quality for spawning in winter and spring. Occurs within the Sacramento-San Joaquin Delta and seasonally within the Suisun Bay, Carquinez Strait and San Pablo Bay.	A	<b>Presumed Absent:</b> There are no recent, nearby CNDDDB occurrences of the species. In addition, the BSA lacks brackish waters. Due to the lack of recent, nearby occurrences and suitable habitat, the species is presumed absent.

				Most often occurs in partially saline waters.		
Sacramento splittail	<i>Pogonichthys macrolepidotus</i>	State: - Fed: - CDFW: SSC		Historically inhabited low moving rivers, sloughs, and alkaline lakes of the Central Valley; now restricted to the Delta, Suisun Bay, and associated marshes. Species is adapted to fluctuating environments with tolerance to water salinities from 10-18 ppt., low oxygen levels (< 1.0 mg/L) and temperatures of 41-75°F. Spawns late February-early July, with a peak in March-April; requires flooded vegetation for spawning activity and protective cover for young.	A	<b>Presumed Absent:</b> The BSA is adjacent to Dry Creek, which is a tributary to the Bear River and the Feather River. This is outside of the species' known range, as it is currently known to be restricted to the Delta and Suisun Bay. Due to the location of the BSA outside of the species' range, it is presumed absent.
Steelhead – Central Valley Distinct Population Segment (DPS)	<i>Oncorhynchus mykiss irideus pop.</i> 11	State: - Fed: T CDFW: -		This species is known to occur along most of the California coastline and inhabits freshwater streams and tributaries in northern and central California. The preferred habitat consists of estuaries, freshwater streams and near shore habitat with productive coastal oceans. Spawning occurs in small freshwater streams and tributaries occurs from January through March and could extend into spring. Spawning occurs where cool, well oxygenated water is available year-round. Approximately 550-1,300 eggs are deposited in an area with good intergravel flow. The fry emerge from the gravel about 4-6 weeks after hatching and remain in shallow protected areas associated with stream margin. Juveniles may remain in freshwater for the rest of their life cycle or return to the ocean. The principal remaining wild populations spawn annually in Deer and Mill	HP	<b>Low to Moderate Potential:</b> The BSA is adjacent to Dry Creek, which is a tributary to the Bear River and the Feather River. According to the CNDDDB, the species has been reported in the Lower Feather River (2003-2012). In addition, Dry Creek is accessible to fish from both the Feather and Bear rivers and contains potentially suitable habitat for the species. Dry Creek is not, however, within mapped Critical Habitat for the species. Due to the species' known range and potentially suitable habitat within Dry Creek, it was determined to have a low to moderate potential to occur.

				Creeks in Tehama County, in the lower Yuba River, and a small population in the lower Stanislaus River.		
<b>Invertebrate Species</b>						
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	State: Fed: CDFW:	E - -	Inhabits relatively large and turbid clay bottomed playa vernal pools. Species requires pools to continuously hold water for a minimum of 19 days and must remain inundated into the summer months. Occupied playa pools typically are 1 to 88 acres in size, but species may utilize smaller, less turbid pools.	A	<b>Presumed Absent:</b> The BSA lacks vernal pools. In addition, there is only one documented CNDDDB occurrence of the species within 10 miles of the BSA, approximately 8 miles away and recorded in 2012. Due to the lack of suitable habitat and the location of recent occurrences, the species is presumed absent.
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	State: Fed: CDFW:	T - -	Species requires red or blue elderberry ( <i>Sambucus sp.</i> ) as host plants. Typically occurs in moist valley oak woodlands associated with riparian corridors in the lower Sacramento River and upper San Joaquin River drainages. Adults are active, feeding, and breeding from March until June.	A	<b>Presumed Absent:</b> The nearest CNDDDB occurrence (~0.7 miles away) of the species was recorded in 1991. However, during the April 2021 biological survey, no elderberry shrubs were identified within the BSA. Due to the lack of host plants within the BSA, the species is presumed absent.
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	State: Fed: CDFW:	T - -	In California, species inhabits portions of Tehama county, south through the Central Valley, and scattered locations in Riverside County and the Coast Ranges. Species is associated with smaller and shallower cool-water vernal pools approximately 6 inches deep and short periods of inundation. Inhabited pools have low to moderate levels of alkalinity and total dissolved solids. The shrimp are temperature sensitive, requiring pools below 50 F to hatch and dying within pools reaching 75 F. Young emerge during cold weather winter storms.	A	<b>Presumed Absent:</b> There are over 200 CNDDDB occurrences of the species within 10 miles of the BSA. The nearest, most recent occurrence of the species is approximately 2.5 miles away and was recorded in 2016, when two mature individuals were identified within a roadside pool along with <i>L. packardii</i> individuals. In 2017, that site was planted as a part of a mitigation project and the species is now considered potentially extirpated from this location. In addition, the BSA itself lacks vernal pools, and the species is presumed absent.

Vernal pool tadpole shrimp	<i>Lepidurus packardi</i>	State: Fed: CDFW:	E - -	Inhabits vernal pools and swales containing clear to highly turbid waters such as pools located in grass bottomed swales of unplowed grasslands, old alluvial soils underlain by hardpan, and mud-bottomed pools with highly turbid water.	A	<b>Presumed Absent:</b> The nearest, most recent occurrence of the species is approximately 2.5 miles away and was recorded in 2016, when immature individuals were identified within a roadside pool along with <i>B. lynchi</i> individuals. In 2017, the site was planted as a part of a mitigation project and the species is now considered potentially extirpated from this location. In addition, the BSA itself lacks vernal pools, and the species is presumed absent.
<b>Mammal Species</b>						
Pallid bat	<i>Antrozous pallidus</i>	State: Fed: CDFW:	- - SSC	Inhabits low elevations of deserts, grasslands, shrub lands, woodlands, and forests year-round. Most common in open, dry habitats with rocky areas for roosting. Forages over open ground within 1-3 miles of day roosts. Prefers caves, crevices, and mines for day roosts, but may utilize hollow trees, bridges, and buildings. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites. Maternity colonies form early April and young are born April-July (below 10,000 feet).	A	<b>Presumed Absent:</b> The BSA lacks open, dry habitats with rocky areas such as caves, crevices, and mines suitable for roosting. There is one CNDDDB occurrence of the species within the Project vicinity, approximately 8 miles away from the BSA (2015). The occurrence reported the species within a low concrete bridge which has since been demolished and replaced with a new bridge that contains roost structures. Due to the lack of suitable roosting habitat within the BSA and the lack of nearby occurrences, the species is presumed absent.
<b>Reptile Species</b>						
Giant garter snake	<i>Thamnophis gigas</i>	State: Fed: CDFW:	T T -	A highly aquatic species that inhabits marsh, swamp, wetland (including agricultural wetlands), sloughs, ponds, rice fields, low gradient streams and irrigation/drainage canals adjacent to uplands. Ideal habitat contains both shallow and deep water with variations in topography. Species requires adequate water during the active season (April-November), and	A	<b>Presumed Absent:</b> The BSA is within close proximity to Dry Creek and irrigated agricultural fields with adjacent drainage canals; however, the habitat within the BSA itself lacks key elements that would support the species. Additionally, there are several recent (2010-2012) occurrences of the species approximately 8 miles away from the BSA and the species is likely extirpated from the nearest (~2 miles away)



				emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat. Species also utilizes mammal burrows for estivation. Requires grassy banks and openings in waterside vegetation for basking and higher elevation uplands for cover and refuge from flood waters during winter dormant season. Mating occurs in the spring and females bear live young.		reported occurrence, where the species has not been sited since before 1987. Due to the lack of suitable habitat within the BSA (despite potentially suitable habitat nearby) the species is presumed absent.
Western pond turtle	<i>Emys marmorata</i>	State: Fed: CDFW:	- - SSC	A fully aquatic turtle of ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches with aquatic vegetation. Suitable habitat includes woodland, forests, and grasslands. Requires logs, rocks, cattail mats, and exposed banks for basking. Suitable upland habitat (sandy banks or grassy open field) is required for reproduction, which begins in April and ends with egg laying as late as August (sea level to 4,700 feet).	A	<b>Presumed Absent:</b> The BSA is adjacent to Dry Creek, but the riparian vegetation within the BSA itself is fairly dense and lacks suitable upland basking habitat for the species. The nearest (~1.5 miles away) CNDDDB occurrence of the species is from 1998. Due to the lack of suitable aquatic and upland habitat within the BSA, as well as the lack of recent occurrences of the species, it is presumed absent.
<b>Plant Species</b>						
Dwarf downingia	<i>Downingia pusilla</i>	State: Fed: CNPS:	- - 2B.2	An annual herb inhabiting vernal pools and mesic soils in valley and foothill grassland communities. Flowers March-May (0-1,500 feet).	A	<b>Presumed Absent:</b> The BSA lacks vernal pool habitat and all reported CNDDDB occurrences of the species are over 5 miles away from the BSA. Due to the lack of suitable habitat and occurrences, the species is presumed absent.
Ferris' milk-vetch	<i>Astragalus tener var. ferrisiae</i>	State: Fed: CNPS:	- - 1B.1	An annual herb inhabiting vernal mesic meadows and seeps and subalkaline flats within valley and foothill grassland communities. Known only from six extant occurrences. Flowers April-May (0-250 feet).	A	<b>Presumed Absent:</b> The BSA lacks vernal mesic meadows and seeps and subalkaline flats. In addition, there are no CNDDDB occurrences of the species within the Project vicinity, and because the species is only known from six extant occurrences, it is presumed absent from the BSA.

Hartweg's golden sunburst	<i>Pseudobahia bahiifolia</i>	State: Fed: CNPS:	E E 1B.1	An annual herb inhabiting clay, often acidic soils of cismontane woodland and valley and foothill grassland communities. Flowers March-April (50-660 feet).	A	<b>Presumed Absent:</b> The species was collected approximately 7 miles away from the BSA in 1847; however, the area has since been heavily developed and the species is now considered extirpated from this location. In addition, the BSA lacks acidic clay soils and much of the area has been converted to agriculture. Due to the possible extirpation of the species and the lack of suitable habitat, it is presumed absent.
Recurved larkspur	<i>Delphinium recurvatum</i>	State: Fed: CNPS:	- - 1B.2	A perennial herb inhabiting poorly drained, fine, alkaline soils in chenopod scrub, Atriplex scrub, cismontane woodland, and valley and foothill grassland communities. Flowers March-June (10-2,600 feet).	A	<b>Presumed Absent:</b> The BSA lacks chenopod scrub, Atriplex scrub, and cismontane woodland. In addition, grasslands within the BSA have been disturbed by agriculture. There are no recent, nearby occurrences of the species and it is presumed absent.
Sanford's arrowhead	<i>Sagittaria sanfordii</i>	State: Fed: CNPS:	- - 1B.2	A perennial rhizomatous herb inhabiting freshwater marshes, swamps, ponds, and ditches. Flowers May-October (0-2,130 feet).	A	<b>Presumed Absent:</b> The BSA is adjacent to Dry Creek, but lacks wetted marshes, swamps, and ponds. There is only one historic (1955) CNDDDB occurrence of the species within the Project vicinity, which is approximately 3 miles away from the BSA. Due to the lack of suitable habitat and the lack of recent occurrences, the species is presumed absent.
Veiny monardella	<i>Monardella venosa</i>	State: Fed: CNPS:	- - 1B.1	An annual herb inhabiting heavy clay soils in cismontane woodlands, valley grasslands, and foothill grasslands. Flowers May-July (195-1,350 feet).	A	<b>Presumed Absent:</b> The BSA lacks heavy clay soils. Additionally, the species was collected approximately 7 miles away from the BSA in 1854; however, the area has since been heavily developed and the species is now considered extirpated from this location. Due to the lack of suitable soils and the extirpation of the species from nearby occurrences, it is presumed absent.

<sup>1</sup>Status: Endangered (E); Threatened (T); Candidate (C), Fully Protected (FP); Rare (R); State Species of Special Concern (SSC); Wait List (WL).

<sup>2</sup>Absent (A) - no habitat present and no further work needed. Habitat Present (HP) - habitat is or may be present. The species may be present. Present (P) - the species is present. Critical Habitat (CH) - project footprint is located within a designated critical habitat unit, but does not necessarily mean that appropriate habitat is present.

## 4. Results: Biological Resources, Discussion of Impacts, and Mitigation

### 4.1 Habitats and Natural Communities of Special Concern

Habitats are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status plants or animals occurring on site. Four habitats of special concern were identified within the Project BSA: stream channel, seasonal wetland, riparian habitat, and Chinook salmon Essential Fish Habitat (EFH). Project impacts are anticipated to occur to stream channel and riparian habitat (**Figure 5. Project Impacts to Habitats of Special Concern**).

#### 4.1.1 Discussion of Stream Channel

There are a number of natural and anthropogenic stream channels in Yuba County. The Feather River runs north to south throughout the County and has many tributaries, including Bear River. Bear River itself is fed by a number of smaller creeks and drainages, such as Dry Creek. Agricultural development in the County has altered the hydrology of the region, such that numerous natural drainages have been converted into irrigation canals and new catchments have been constructed in otherwise dry land. Due to this, there are many jurisdictional and non-jurisdictional waters within the region. Regardless of jurisdiction, stream channels provide potentially key water resources for not only humans, but wildlife and plant species that occupy the area.

##### 4.1.1.1 Survey Results for Stream Channel

Dry Creek, a tributary to Bear River, runs through the southern portion of the BSA at the Gibbs Pond pipeline location. In addition, there is a small, intermittent, unnamed stream channel which flows via culvert pipe into Dry Creek at this location. Dry Creek has direct connectivity to Bear River approximately 1.2 miles southwest of the BSA. Bear River is considered a traditional navigable water of the U.S. and with direct connectivity, Dry Creek would also be considered a jurisdictional water of the U.S., water of the State, and CDFW jurisdictional habitat. As Dry Creek is a jurisdictional water of the U.S., State, and CDFW, the intermittent unnamed channel is considered jurisdictional as well, due to its direct connection to another jurisdictional feature.

During biological surveys, approximately 0.37 acres of stream channel were mapped within the BSA. Signs such as cut banks and vegetation growth and destruction patterns were used to identify and map the OHWM of stream channels within the BSA.

##### 4.1.1.2 Project Impacts to Stream Channel

The Project is anticipated to have temporary impacts to approximately 0.01 acres and permanent impacts to <0.001 acres (approximately 17 square feet) of stream channel due to the replacement of new CMP and associated gate structures (**Figure 5**).

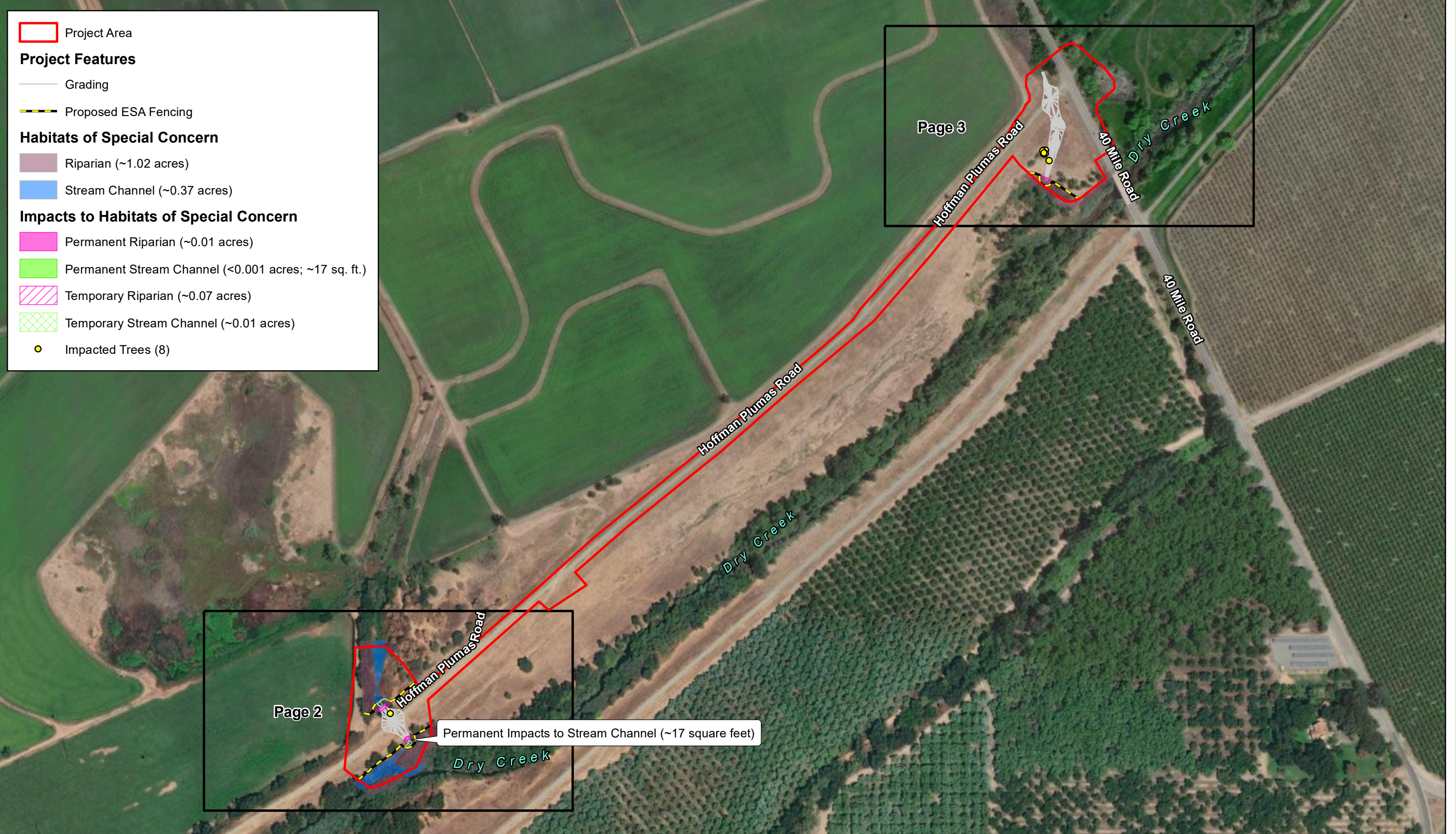
##### 4.1.1.3 Avoidance and Minimization Efforts/Compensatory Mitigation for Stream Channel

The following avoidance and minimization measures, **BIO-1** through **BIO-7**, would be incorporated into the Project in order to avoid and minimize any potential impacts to stream channel and other sensitive natural habitats.

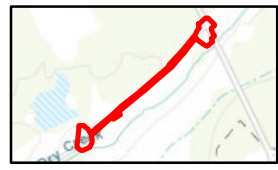
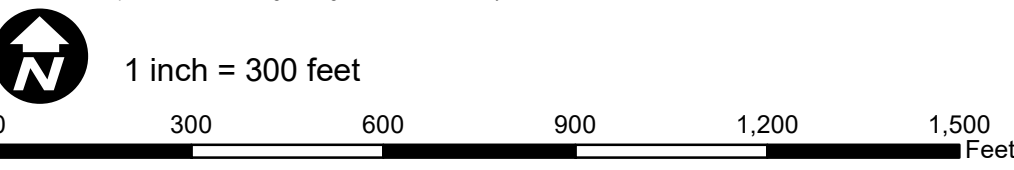
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Source: ESRI Maps Online; Dokken Engineering 7/16/2021; Created By: cfavro

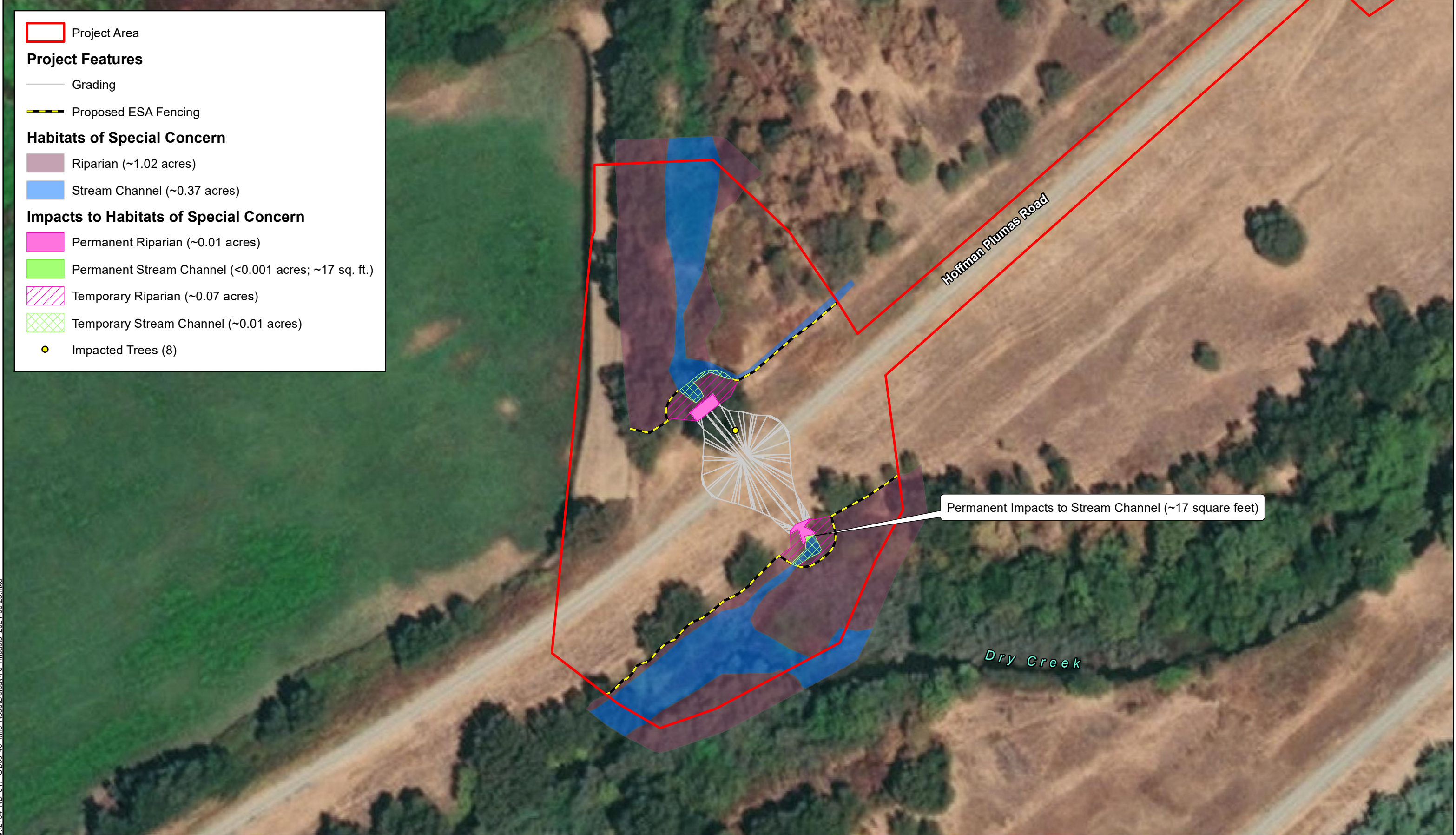


**Figure 5**  
**Project Impacts to Habitats of Special Concern**  
**Page 1 of 3**  
RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California





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Source: ESRI Maps Online; Dokken Engineering 7/16/2021; Created By: cfavro



**Figure 5**  
**Project Impacts to Habitats of Special Concern**  
**Page 2 of 3**  
RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California





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Project Area

**Project Features**

Grading

Proposed ESA Fencing

**Habitats of Special Concern**

Riparian (~1.02 acres)

Stream Channel (~0.37 acres)

**Impacts to Habitats of Special Concern**

Permanent Riparian (~0.01 acres)

Permanent Stream Channel (<0.001 acres; ~17 sq. ft.)

Temporary Riparian (~0.07 acres)

Temporary Stream Channel (~0.01 acres)

Impacted Trees (8)

Source: ESRI Maps Online; Dokken Engineering 7/16/2021; Created By: cfavro

N

1 inch = 75 feet

0

75

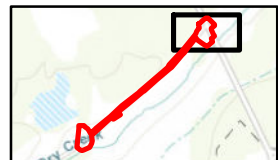
150

225

300

375

Feet



**Figure 5**  
**Project Impacts to Habitats of Special Concern**  
**Page 3 of 3**  
RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California





**BIO-1:** Best Management Practices:

- Existing vegetation would be protected where feasible to reduce erosion and sedimentation. Vegetation would be preserved by installing temporary fencing, or other protection devices, around sensitive biological resources.
- Exposed soils would be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.
- Exposed soils would be stabilized, through watering or other measures, to prevent the movement of dust at the Project site caused by wind and construction activities such as traffic and grading activities.
- All concrete curing activities would be conducted to minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.
- All construction materials, vehicles, stockpiles, and staging areas would be situated outside of the stream channel as feasible. All stockpiles would be covered, as feasible.
- All erosion control measures and storm water control measures would be properly maintained until final grading has been completed and permanent erosion control measures are implemented.
- All disturbed areas would be restored to pre-construction contours and revegetated, where applicable, either through hydroseeding or other means, with native or approved non-invasive exotic species.
- All construction materials would be hauled off-site after completion of construction.

**BIO-2:** Prior to the start of construction activities, the Project limits in proximity to sensitive natural habitats must be marked with high visibility Environmentally Sensitive Area (ESA) fencing or staking to ensure construction will not further encroach into waters or sensitive habitats. The Project biologist will periodically inspect the ESA to ensure sensitive locations remain undisturbed.

**BIO-3:** Refueling or maintenance of equipment without secondary containment shall not be permitted to occur within 100 feet of stream channels. All refueling and maintenance that must occur within 100 feet of stream channels must occur over plastic sheeting or other secondary containment measures to capture accidental spills before they can contaminate the soil. Secondary containment must have a raised edge (e.g. sheeting wrapped around wattles).

**BIO-4:** Equipment will be checked daily for leaks and will be well maintained to prevent lubricants and any other deleterious materials from entering stream channels and associated riparian areas.

**BIO-5:** Vehicle maintenance, staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants must remain outside of sensitive habitat marked with high-visibility fencing. Any necessary equipment washing must occur where the water cannot flow into sensitive habitat communities.



**BIO-6:** A chemical spill kit must be kept onsite and available for use in the event of a spill.

**BIO-7:** Secondary containment consisting of plastic sheeting or other impermeable sheeting shall be installed during pipeline grouting activities, and underneath all stationary equipment to prevent petroleum products or other chemicals from contaminating the soil or from spilling directly into stream channels. Secondary containment must have a raised edge (e.g. sheeting wrapped around wattles).

As a component of measure **BIO-1**, any temporarily impacted stream channel habitat would be recontoured and returned to preconstruction conditions upon completion of the Project. No additional mitigation for the minimal permanent impacts to stream channel habitat is proposed.

#### **4.1.2 Discussion of Seasonal Wetland**

Seasonal wetlands are flooded frequently, creating unique anaerobic conditions which support soils and vegetation typically not found in upland areas. Wetlands are productive habitats, and their distinctive conditions warrant consideration as a vital part of a hydrologic system.

##### *4.1.2.1 Survey Results for Seasonal Wetland*

Approximately 0.20 acres of seasonal wetland were identified within the BSA, at the 40 Mile Road pipeline location. This wetland was identified as such by visual reconnaissance, as well as aerial imagery and findings from the NWI. A wetland delineation pursuant to the USACE guidelines was not conducted on this feature because the seasonal wetland would not be disturbed by Project activities.

##### *4.1.2.2 Project Impacts to Seasonal Wetland*

The intake of the existing 18-inch diameter CMP at 40 Mile Road located within seasonal wetland would be capped, filled with a low pressure flowable grout, and abandoned in place. Capping of the pipe would include light footwork, and no equipment would be used within the seasonal wetland. As such, no temporary or permanent impacts to seasonal wetland are anticipated as a result of the proposed Project.

##### *4.1.2.3 Avoidance and Minimization Efforts/Compensatory Mitigation for Seasonal Wetland*

Impacts to seasonal wetland are not anticipated as no direct ground disturbance to the area where this resource occurs is expected. Furthermore, **BIO-1** and **BIO-3** through **BIO-7** would be implemented into the Project to ensure that impacts to sensitive habitats outside of the Project impact area would not be affected by Project-related activities. With the lack of direct impacts expected and the inclusion of these measures, compensatory mitigation is not required for seasonal wetland.

#### **4.1.3 Discussion of Riparian Habitat**

Riparian habitats occur alongside sources of surface water and are often centers of biological activity. The general structure of riparian habitats typically involves a canopy, subcanopy, and an understory shrub layer. Lianas and herbaceous plants constitute the groundcover vegetation. The understory is very thick, and fallen limbs and debris create complex habitat elements that contribute to a riparian habitat's ecological significance.

#### 4.1.3.1 Survey Results for Riparian Habitat

Riparian habitat associated with Dry Creek was mapped at both the Gibbs Pond and 40 Mile Road pipeline locations. Approximately 1.02 acres of riparian habitat occurs within the BSA.

#### 4.1.3.2 Project Impacts to Riparian Habitat

The Project is anticipated to have temporary impacts to approximately 0.07 acres of riparian habitat and permanent impacts to approximately 0.01 acres of riparian habitat, due to de-grading of the existing levee section to the proposed culvert profile, installation of the pipelines, and compacting the area with imported fill. In addition, the Project would require the removal of approximately eight trees (**Table 4. Project Impacts to Trees**).

**Table 4. Project Impacts to Trees**

Species	Number of Trees Planned for Removal	DBH Range (inches)
Oregon ash ( <i>Fraxinus latifolia</i> )	7	4-8
Valley oak ( <i>Quercus lobata</i> )	1	24

#### 4.1.3.3 Avoidance and Minimization Efforts/Compensatory Mitigation for Riparian Habitat

In addition to general BMPs and measures **BIO-1** through **BIO-7**, which includes stipulations for recontouring and seeding of temporary impact areas after construction is completed, the following mitigation measure would be incorporated into the Project to compensate for impacts to riparian habitat.

**BIO-8:** Permanent impacts to riparian habitat will be mitigated for by the payment of an in-lieu fee or purchase of credits from a regionally appropriate, agency-approved mitigation bank. Credits for permanent impacts to riparian habitat will be purchased at a 2:1 ratio.

#### 4.1.4 Discussion of Chinook Salmon Essential Fish Habitat

EFH is identified under the Magnuson-Stevens Act and functions in protecting and enhancing habitat for federally protected fish species. EFH for Chinook salmon has been identified and mapped on the West Coast.

##### 4.1.4.1 Survey Results for Chinook Salmon Essential Fish Habitat

The BSA is located within mapped Chinook salmon EFH and contains a water feature, Dry Creek, which is accessible to fish and thus can function as EFH. The BSA also contains an unnamed tributary to Dry Creek; however, this tributary connects to Dry Creek via culvert and is inaccessible to fish.

##### 4.1.4.2 Project Impacts to Chinook Salmon Essential Fish Habitat

The Project would have approximately 0.006 (250 square feet) temporary impacts and minimal (<0.001 acres, 17 square feet) permanent impacts to Dry Creek. With avoidance, minimization, and mitigation measures, the Project would have only minimal impacts to Chinook salmon EFH.

#### 4.1.4.3 Avoidance and Minimization Efforts/Compensatory Mitigation for Chinook Salmon Essential Fish Habitat

The Project is not anticipated to have substantial impacts to Dry Creek and with measures **BIO-1** through **BIO-8**, no indirect impacts to Chinook salmon EFH are anticipated. No additional avoidance, minimization and/or mitigation measures are necessary or proposed for Chinook salmon EFH.

## 4.2 Special Status Plant Species

Plants are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the presence of habitat required by the special-status plants occurring on site. No plant species were determined to have the potential to occur within the BSA and no Project-related impacts to special-status plant species are anticipated.

## 4.3 Special Status Animal Species

Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status animals occurring on site. Three special-status wildlife species were determined to have the potential to occur within the BSA: the northern harrier (*Circus hudsonius*), a CDFW Species of Special Concern (SSC), the Swainson's hawk (*Buteo swainsoni*), a state threatened species, and the Central Valley steelhead DPS (*Oncorhynchus mykiss irideus pop. 11*), a federally threatened species.

### 4.3.1 Discussion of Northern Harrier

The northern harrier is a CDFW SSC. The species is known to breed and forage in many different open habitats. Key components of northern harrier habitats are adequate vegetative cover, presence of abundant, suitable prey, and scattered lookout perches such as shrubs or fence posts. This may include marshes, meadows, lake borders, rivers, grasslands, weed fields, pastures, low croplands, sagebrush flats, and desert sinks. The species is a ground nester, nesting within patches of tall, dense vegetation in typically undisturbed areas. The primary threat to the species is a loss of nesting and foraging habitat, as well as nest failure due to human disturbance (Shuford & Gardali 2008).

#### 4.3.1.1 Survey Results for Northern Harrier

Prior to field surveys, a search was conducted on CNDDDB which indicated that there are four occurrences of the species within the Project vicinity, all approximately 6-8 miles away from the BSA and recorded in 2000. In addition, biological surveys identified potentially suitable habitat for the northern harrier within the BSA, including wetted areas, riparian vegetation, annual grasslands, and nearby agricultural fields. The species was not observed during the biological survey; however, due to the presence of suitable habitat, it is presumed to have a low to moderate potential to occur within the BSA.

#### 4.3.1.2 Project Impacts to Northern Harrier

With avoidance and minimization measure **BIO-9** below, direct harm to northern harrier individuals as a result of the proposed Project is not anticipated. Project impacts to northern

harrier would be limited to temporary disturbance of approximately 0.07 acres of habitat, as well as a permanent loss of 0.01 acres of habitat.

#### 4.3.1.3 Avoidance and Minimization Efforts/Compensatory Mitigation for Northern Harrier

The following avoidance and minimization measure, **BIO-9**, would be incorporated into the Project in order to avoid impacts to the northern harrier. Species-specific compensatory mitigation is not proposed.

**BIO-9:** The construction contractor shall avoid removing any vegetation during the nesting bird season (February 15 to August 31). If vegetation must be removed within the nesting season, a pre-construction nesting bird survey must be conducted no more than 3 days prior to vegetation removal. The vegetation must be removed within 3 days from the nesting bird survey.

A minimum 100-foot no-disturbance buffer will be established around any active nest of migratory birds and a minimum 300-foot no-disturbance buffer will be established around any nesting raptor species. The contractor must immediately stop work in the nesting area until the appropriate buffer is established and is prohibited from conducting work that could disturb the birds (as determined by the Project biologist and in coordination with RD 817) in the buffer area until a qualified biologist determines the young have fledged. A reduced buffer can be established if determined appropriate by the Project biologist and approved by RD 817 and CDFW.

#### 4.3.2 Discussion of Swainson's Hawk

Swainson's hawk is a raptor species that is listed as threatened under the CESA. The species was once abundant in California, but now occupies a more limited range in part due to the loss of nesting and foraging habitat that has occurred with the urbanization of California, particularly within the Central Valley. The species typically nests in stands of tall trees adjacent to foraging habitat, such as grasslands, livestock pastures, or grain and alfalfa fields. Nesting trees are often found in riparian areas or in oak savannah. Suitable foraging habitat must be able to support populations of prey species, such as small rodents, large arthropods, amphibians, reptiles, and small birds. The species breeds in California from approximately March through October, after which it migrates great distances – as far as Central and South America – to winter (Zeiner 1988-1990).

##### 4.3.2.1 Survey Results for Swainson's Hawk

Prior to field surveys, literature research was conducted that indicates a high number of recorded occurrences of the species within the Project vicinity. There are over 80 CNDDDB occurrences of the species within 10 miles of the BSA. Furthermore, the species was observed nesting within less than 0.1 mile of the BSA in 2004. More recent occurrences of the species (2015, 2016) are approximately 6 miles from the BSA, along the Feather River. Additionally, during April 2021 biological surveys, riparian woodland habitat was identified within the BSA that has the potential to serve as suitable Swainson's hawk nesting habitat. One Swainson's hawk individual was observed soaring over the BSA during this survey, although no direct evidence of the species nesting within the BSA was identified. Due to the presence of suitable habitat, the many occurrences of the species, and the observation of the species passing through the BSA, the species was determined to have a high potential to occur within the BSA.

#### 4.3.2.2 Project Impacts to Swainson's Hawk

With avoidance and minimization measures **BIO-10** through **BIO-12**, take of Swainson's hawk is not anticipated. Project impacts to Swainson's hawk would be limited to temporary disturbance of approximately 0.07 acres of habitat (riparian woodland), as well as a permanent loss of 0.01 acres of potential nesting habitat. Temporary impact areas would be revegetated per **BIO-1** and permanent habitat loss would be mitigated for as outlined in measure **BIO-8**.

#### 4.3.2.3 Avoidance and Minimization Efforts/Compensatory Mitigation for Swainson's Hawk

The following avoidance and minimization measures would be incorporated into the Project to avoid impacts to Swainson's hawk. Furthermore, compensatory mitigation for the species' habitat would be achieved with the implementation of measures **BIO-9** and **BIO-10**, which discusses mitigation of all riparian habitat impacts.

**BIO-10:** Construction personnel must receive environmental awareness training. Awareness training shall be given by the Project biologist(s) who have experience in the natural history of species that may occur within the Project area. The training will cover protocol for, identification of, and natural history of the special status species that have the potential to occur within the Project area (such as Swainson's hawk and northern harrier).

**BIO-11:** The removal of large (>6 inches DBH) diameter trees will be avoided to the greatest extent practicable. If feasible, any large diameter trees that cannot be protected within the Project impact area shall be removed outside of the Swainson's hawk nesting season (February 1<sup>st</sup> – August 31<sup>st</sup>) prior to construction.

**BIO-12:** In accordance with the Swainson's Hawk Technical Advisory Committee *Recommended Timing and Methodology For Swainson's Hawk Nesting Surveys In California's Central Valley* (2000), protocol level surveys will be conducted during the appropriate survey periods immediately prior to construction to determine presence/absence of the species. If Swainson's hawk are discovered within ¼ mile of the Project area, a 500-foot no-work buffer will be installed around the nest using ESA fencing and the Project biologist will monitor the nest until it is determined that the young have fledged. A reduced buffer or additional appropriate protective measures may be developed in coordination with CDFW.

### 4.3.3 Discussion of Central Valley Steelhead

The Central Valley steelhead is an anadromous fish species that was once abundant in California coastal and Central Valley drainages. The DPS of Central Valley steelhead includes steelhead in the Sacramento and San Joaquin River basins in the Central Valley. The species spawns in small, freshwater streams and migrate to the oceans after one to several years to mature. Adult steelhead return to their natal streams to spawn, completing the life cycle.

#### 4.3.3.1 Survey Results for Central Valley Steelhead

The BSA includes an area of Dry Creek, which is a tributary to the Bear River and the Feather River. According to the CNDDDB, the species has been reported in the Lower Feather River (2003-2012). In addition, Dry Creek is accessible to fish from both the Feather and Bear rivers and contains potentially suitable habitat for the species. Dry Creek is not, however, within mapped

Critical Habitat for the species. Due to the species' known range and potentially suitable habitat within Dry Creek, it was determined to have a low to moderate potential to occur.

#### *4.3.3.2 Project Impacts to Central Valley Steelhead*

The Project would have minimal impacts to Dry Creek; therefore, the Project would have no impacts to steelhead.

#### *4.3.3.3 Avoidance and Minimization Efforts/Compensatory Mitigation for Central Valley Steelhead*

The Project is not anticipated to substantially impact Dry Creek and with measures **BIO-1** through **BIO-8**, no indirect impacts to steelhead are anticipated. No species-specific measures are proposed.



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## **5. Conclusions and Regulatory Determinations**

### **5.1 Federal Endangered Species Act Consultation Summary**

According to the species lists from USFWS and NMFS, as well as habitat assessments and literature review, one federally listed species was determined to have the potential to occur within the BSA, the Central Valley steelhead. However, Project activities would not extend below the OHWM of Dry Creek and no impacts to steelhead individuals or habitat is expected to occur. As a result, the project would have no effect to Central Valley steelhead, along with all other federally listed species returned on database searches. Section 7 consultation regarding federally listed species is not proposed.

### **5.2 Essential Fish Habitat Consultation Summary**

The BSA contains EFH for Chinook salmon; however, the Project would have no impacts to Chinook salmon EFH and further consultation with NMFS regarding EFH is not required.

### **5.3 California Endangered Species Act Consultation Summary**

One state-listed species was determined to have the potential to occur within the BSA, the threatened Swainson's hawk. With the appropriate avoidance and minimization measures incorporated into Project activities, take of the species is not anticipated and further consultation with CDFW regarding the CESA-listed Swainson's hawk is not proposed.

### **5.4 Wetlands and Other Waters Coordination Summary**

Dry Creek and an unnamed tributary are the jurisdictional water features identified within the BSA. Project. The Project is anticipated to have temporary impacts to approximately 0.01 acres and permanent impacts to <0.001 acres (approximately 17 square feet) of stream channel. The Project would obtain the appropriate permits from regulatory agencies as required. Temporary impact areas would be restored to their original condition, and as permanent impacts to jurisdictional waters would be minimal, further compensatory mitigation is not proposed.

As the Project involves maintenance of existing drainage ditches, the Project is exempt from permit requirement under the Section 404 of the CWA per the exemptions listed in Section 404(f)(1). The Project would not require Section 404 permit coverage.

### **5.5 Invasive Species**

Invasive plant species were identified within the BSA during survey efforts, making up approximately 40% of plant species observed. These include species with a California Invasive Plant Council (Cal-IPC) invasive rating of high, such as Medusa head (*Elymus caput-medusae*) and Himalayan blackberry (Cal-IPC 2021).

In order to prevent the spread or infestation of invasive species in the BSA, the following measures would be implemented.

**BIO-13:** Prior to arrival at the Project site and prior to leaving the Project site, construction equipment that may contain invasive plants and/or seeds will be cleaned to reduce the spreading of noxious weeds.

**BIO-14:** Hydroseed and plant mixes to be used during or post-construction must consist of a biologist approved plant palette seed mix of regionally appropriate native species.

## **5.6 Other**

### **5.6.1 Migratory Bird Treaty Act**

Native bird species are protected under the MBTA and have the potential to nest within the BSA. Avoidance and minimization measure **BIO-9** (see Section 4.3.1.3) would be implemented in order to avoid impacts to native bird species to the greatest extent feasible.

### **5.6.2 General Wildlife**

To prevent harm to local wildlife, the following avoidance and minimization measures would be implemented.

**BIO-15:** Clearing and grubbing will be accomplished at a maximum speed of 3 miles per hour to allow wildlife enough time to escape the project area.

**BIO-16:** The contractor must dispose of all food-related trash in closed containers and must remove it from the Project area each day during construction. Construction personnel must not feed or attract wildlife to the Project area.

**BIO-17:** The contractor must not apply rodenticide or herbicide within the Project area.

## 6. References

- Calflora. 2021. Information on Wild California Plants. Available at: <<https://www.calflora.org/>> (accessed 6/2/2021).
- California Department of Fish and Wildlife. 2021. California Natural Diversity Database RareFind. Available at: <<https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx>> (accessed 4/19/2021).
- California Invasive Plant Council. 2021. The Cal-IPC Inventory. Available at: <<https://www.cal-ipc.org/plants/inventory/>> (accessed 6/2/2021).
- California Native Plant Society. 2021. Inventory of Rare and Endangered Plants of California. Available at: <<https://rareplants.cnps.org/>> (accessed 4/19/2021).
- Lichvar, R. W and McColley, S.M. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual. United States Army Corps of Engineers Engineer Research and Development Center.
- National Wetlands Inventory. 2021. Wetlands Mapper. Available at: <<https://www.fws.gov/wetlands/data/mapper.html>> (accessed 6/2/2021).
- Natural Resources Conservation Service. 2021. Web Soil Survey. Available at: <<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>> (accessed 5/4/2021).
- Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.
- The Jepson Herbarium. 2021. Jepson eFlora. Available at: <<https://ucjeps.berkeley.edu/eflora/>> (accessed 6/2/2021).
- U.S. Climate Data. 2021. Climate Marysville – California. Available at: <<https://www.usclimatedata.com/climate/marysville/california/united-states/usca0676>> (accessed 6/2/2021).
- United States Fish and Wildlife Service. 2021. Information for Planning and Consultation. Available at: < <https://ecos.fws.gov/ipac/project/list>> (accessed 4/19/2021).
- Yoshiyama, R. M., Gerstung, E. R., Fisher, F. W., and Moyle, P. B. 2001. Historical and Present Distribution of Chinook Salmon in the Central Valley Drainage of California. California Department of Fish and Game Fish Bulletin. 179:71–176.



## **Appendix A. Tree Survey Memorandum**







June 7, 2021

Tim Chamberlain  
Wood Rogers, Inc.  
3301 C Street, Building 800-B  
Sacramento, CA 95816

**RE: Gibbs Pond and 40 Mile Road Pipe Repair Project - Tree Survey**

Mr. Tim Chamberlain,

On April 21, 2021, Dokken Engineering biologist and ISA certified arborist Scott Salembier and biologist Clare Favro performed a tree survey of the Gibbs Pond and 40 Mile Road Pipe Repair Project (Project). The Project is located where 40 Mile Road crosses Dry Creek approximately 2.75 east of State Route 70 and 3 miles west of the Town of Wheatland. The Project is within Section 11, Township 13 North, Range 4 East of the Mount Diablo Meridian within the United States Geological Survey 7.5-minute quadrangles Sheridan and Nicolaus (**Figure 1. Project Vicinity; Figure 2. Project Location**).

The approximately 8.28-acre Project area was surveyed. The survey focused on trees within and adjacent to the riparian zone of Dry Creek and where Project impacts are anticipated to occur. The survey was conducted within the blooming season and during ideal temperatures with no seasonal or climactic limitations that are anticipated to influence the results of the survey. Survey methods involved measuring the diameter at breast height (DBH) of trees within the survey area and mapping the location of trees with a DBH of greater than 4 inches. The DBH of multi-stemmed trees was calculated by measuring the DBH of all trunks over 4 inches in the field, then adding the total diameter of the largest trunk to half the diameter of each original trunk.

There were 40 trees and three species mapped within the survey area (**Table 1. Riparian Trees within the Survey Area; Figure 3. Tree Survey Results**).

**Table 1. Riparian Trees within the Survey Area**

Species	Number Observed	DBH Range (inches)
Oregon ash ( <i>Fraxinus latifolia</i> )	27	4-17
Valley oak ( <i>Quercus lobata</i> )	12	6-29
Interior live oak ( <i>Quercus wislizeni</i> )	1	8

If you have any questions regarding the results of this survey, please feel free to contact me at [ssalembier@dokkenengineering.com](mailto:ssalembier@dokkenengineering.com).

Sincerely,

---

Scott Salembier  
Associate Environmental Planner/Biologist  
ISA Certified Arborist  
Dokken Engineering



# DOKKEN ENGINEERING

*Transportation Solutions from Concept to Construction*

Supporting Attachments:

**Figure 1. Project Vicinity**

**Figure 2. Project Location**

**Figure 3. Tree Survey Results**





Source: ESRI World Street Maps Online; Dokken Engineering 7/13/2021; Created By: cfavro

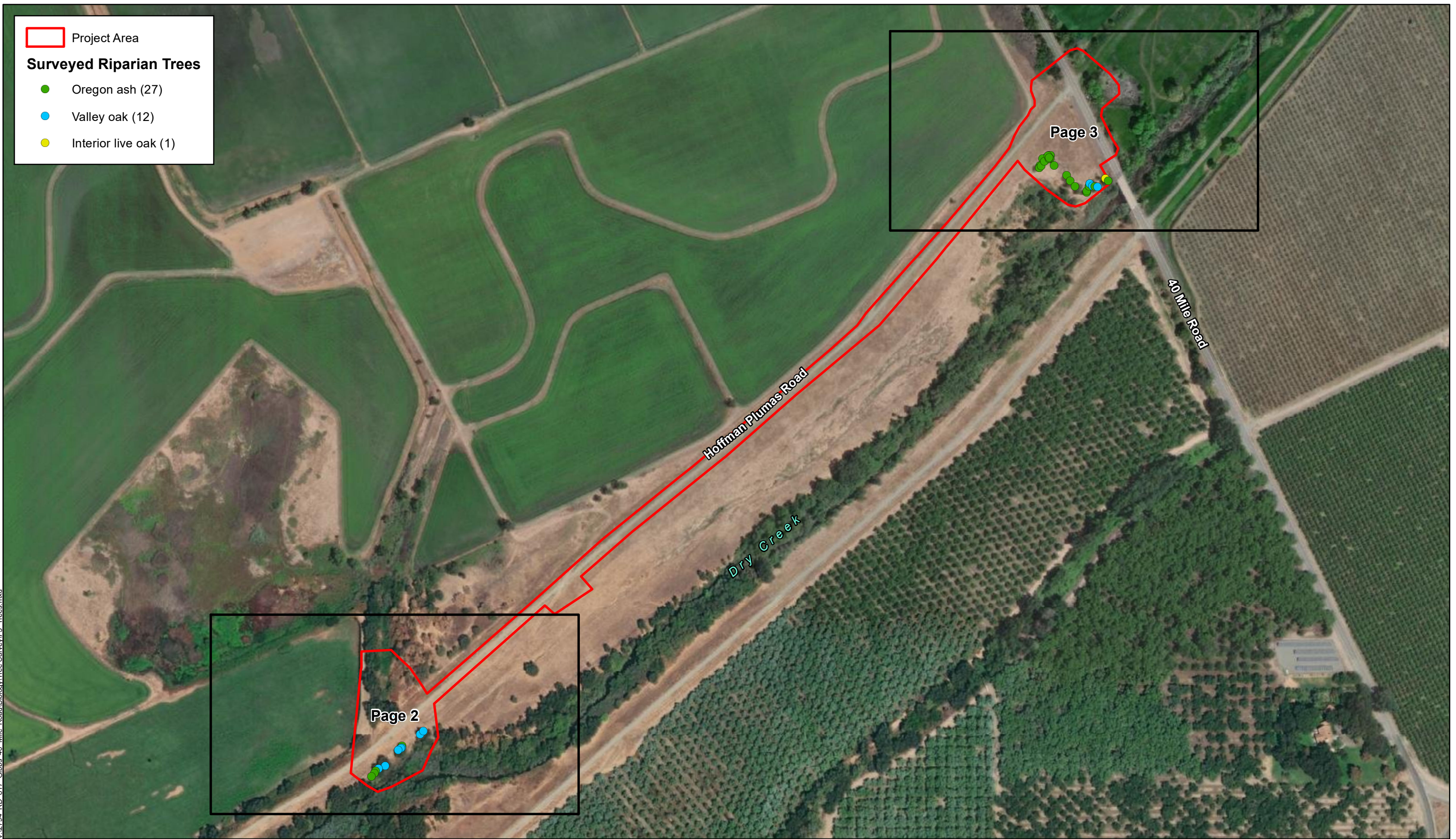


0 0.25 0.5 0.75 1 Miles

**Figure 2**  
**Project Location**  
RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California



V:\2794 RD 817 Gibbs 40 Mile Road\Biology\Tree Survey\F3\_Trees.mxd



Source: ESRI Maps Online; Dokken Engineering 7/13/2021; Created By: cfavro



1 inch = 300 feet

0 300 600 900 1,200 1,500 Feet



**Figure 3**  
**Tree Survey Results**  
**Page 1 of 3**

RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California







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Project Area

**Surveyed Riparian Trees**

Oregon ash (27)

Valley oak (12)

Interior live oak (1)

Source: ESRI Maps Online; Dokken Engineering 7/13/2021; Created By: cfavro

1 inch = 75 feet

0

75

150

225

300

375

Feet





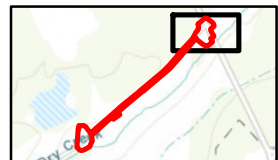




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Source: ESRI Maps Online; Dokken Engineering 7/13/2021; Created By: cfavro



**Figure 3**  
**Tree Survey Results**  
**Page 3 of 3**  
RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California





## **Appendix B. USFWS Species List**







## 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:

April 19, 2021

Consultation Code: 08ESMF00-2021-SLI-1597

Event Code: 08ESMF00-2021-E-04671

Project Name: Gibbs and 40 Mile Road Pipe Repair Project

Subject: List of threatened and endangered species that may occur in your proposed project location 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](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](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

[www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html).

[http://](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

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## Project Summary

Consultation Code: 08ESMF00-2021-SLI-1597

Event Code: 08ESMF00-2021-E-04671

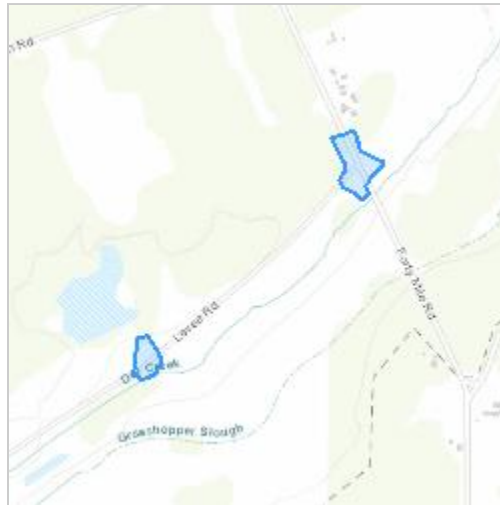
Project Name: Gibbs and 40 Mile Road Pipe Repair Project

Project Type: WATER SUPPLY / DELIVERY

Project Description: Gibbs and 40 Mile Road Pipe Repair Project

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.996893799999995,-121.49158220153208,14z>



Counties: Yuba County, California

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## 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<sup>1</sup>, 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 <i>Coccyzus americanus</i> Population: Western U.S. DPS There is <b>proposed</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/3911">https://ecos.fws.gov/ecp/species/3911</a>	Threatened

## Reptiles

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

## Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a>	Threatened

## Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a>	Threatened

## Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/7850">https://ecos.fws.gov/ecp/species/7850</a>	Threatened

## Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/8246">https://ecos.fws.gov/ecp/species/8246</a>	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/498">https://ecos.fws.gov/ecp/species/498</a>	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/2246">https://ecos.fws.gov/ecp/species/2246</a>	Endangered

## Critical habitats

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

## **Appendix C. CDFW Species List**





# Selected Elements by Common Name

## California Department of Fish and Wildlife

### California Natural Diversity Database



Query Criteria: Quad</span> IS </span>(Sheridan (3812184)</span> OR </span>Nicolaus (3812185)</span> OR </span>Wheatland (3912114)</span> OR </span>Olivehurst (3912115))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>Antioch Dunes anthicid beetle</b> <i>Anthicus antiochensis</i>	IICOL49020	None	None	G1	S1	
<b>bank swallow</b> <i>Riparia riparia</i>	ABPAU08010	None	Threatened	G5	S2	
<b>California linderiella</b> <i>Linderiella occidentalis</i>	ICBRA06010	None	None	G2G3	S2S3	
<b>chinook salmon - Central Valley spring-run ESU</b> <i>Oncorhynchus tshawytscha</i> pop. 11	AFCHA0205L	Threatened	Threatened	G5T1T2Q	S2	
<b>Conservancy fairy shrimp</b> <i>Branchinecta conservatio</i>	ICBRA03010	Endangered	None	G2	S2	
<b>dwarf downingia</b> <i>Downingia pusilla</i>	PDCAM060C0	None	None	GU	S2	2B.2
<b>Ferris' milk-vetch</b> <i>Astragalus tener</i> var. <i>ferrisiae</i>	PDFAB0F8R3	None	None	G2T1	S1	1B.1
<b>giant gartersnake</b> <i>Thamnophis gigas</i>	ARADB36150	Threatened	Threatened	G2	S2	
<b>Great Valley Cottonwood Riparian Forest</b> <i>Great Valley Cottonwood Riparian Forest</i>	CTT61410CA	None	None	G2	S2.1	
<b>Great Valley Mixed Riparian Forest</b> <i>Great Valley Mixed Riparian Forest</i>	CTT61420CA	None	None	G2	S2.2	
<b>Hartweg's golden sunburst</b> <i>Pseudobahia bahiifolia</i>	PDAST7P010	Endangered	Endangered	G1	S1	1B.1
<b>North American porcupine</b> <i>Erethizon dorsatum</i>	AMAFJ01010	None	None	G5	S3	
<b>Northern Hardpan Vernal Pool</b> <i>Northern Hardpan Vernal Pool</i>	CTT44110CA	None	None	G3	S3.1	
<b>northern harrier</b> <i>Circus hudsonius</i>	ABNKC11011	None	None	G5	S3	SSC
<b>pallid bat</b> <i>Antrozous pallidus</i>	AMACC10010	None	None	G4	S3	SSC
<b>recurved larkspur</b> <i>Delphinium recurvatum</i>	PDRAN0B1J0	None	None	G2?	S2?	1B.2
<b>Sacramento anthicid beetle</b> <i>Anthicus sacramento</i>	IICOL49010	None	None	G1	S1	
<b>Sacramento splittail</b> <i>Pogonichthys macrolepidotus</i>	AFCJB34020	None	None	GNR	S3	SSC
<b>Sacramento Valley tiger beetle</b> <i>Cicindela hirticollis abrupta</i>	IICOL02106	None	None	G5TH	SH	





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
<b>Sanford's arrowhead</b> <i>Sagittaria sanfordii</i>	PMALI040Q0	None	None	G3	S3	1B.2
<b>steelhead - Central Valley DPS</b> <i>Oncorhynchus mykiss irideus pop. 11</i>	AFCHA0209K	Threatened	None	G5T2Q	S2	
<b>Swainson's hawk</b> <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S3	
<b>tricolored blackbird</b> <i>Agelaius tricolor</i>	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
<b>valley elderberry longhorn beetle</b> <i>Desmocerus californicus dimorphus</i>	IICOL48011	Threatened	None	G3T2	S3	
<b>veiny monardella</b> <i>Monardella venosa</i>	PDLAM18082	None	None	G1	S1	1B.1
<b>vernal pool fairy shrimp</b> <i>Branchinecta lynchi</i>	ICBRA03030	Threatened	None	G3	S3	
<b>vernal pool tadpole shrimp</b> <i>Lepidurus packardii</i>	ICBRA10010	Endangered	None	G4	S3S4	
<b>western pond turtle</b> <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
<b>western spadefoot</b> <i>Spea hammondi</i>	AAABF02020	None	None	G2G3	S3	SSC
<b>western yellow-billed cuckoo</b> <i>Coccyzus americanus occidentalis</i>	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
<b>white-tailed kite</b> <i>Elanus leucurus</i>	ABNKC06010	None	None	G5	S3S4	FP

Record Count: 31

## **Appendix D. CNPS Species List**



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

## Plant List

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

### Search Criteria

Found in Quads 3912115, 3912114 3812185 and 3812184;

[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
<a href="#">Downingia pusilla</a>	dwarf downingia	Campanulaceae	annual herb	Mar-May	2B.2	S2	GU
<a href="#">Monardella venosa</a>	veiny monardella	Lamiaceae	annual herb	May,Jul	1B.1	S1	G1
<a href="#">Sagittaria sanfordii</a>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3

### Suggested Citation

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[CalPhotos](#)

#### Questions and Comments

[rareplants@cnps.org](mailto:rareplants@cnps.org)

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## **Appendix E. NMFS Species List**



## Clare Favro

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**From:** Clare Favro  
**Sent:** Monday, May 3, 2021 1:55 PM  
**To:** nmfswcrca.specieslist@noaa.gov  
**Subject:** RD 817 Gibbs and 40 Mile Road Pipe Repair Project

Quad Name **Sheridan**  
Quad Number **38121-H4**

### **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) -  
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 - **X**  
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 -



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 -

## **Appendix F. NRCS Soil Report**







United States  
Department of  
Agriculture

NRCS

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Yuba County, California



# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

---

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and



## Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

---

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map



Map Scale: 1:6,690 if printed on A portrait (8.5" x 11") sheet.

0 50 100 200 300 Meters

0 300 600 1200 1800 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

# Custom Soil Resource Report

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals

### Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Yuba County, California  
Survey Area Data: Version 14, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
139	Columbia fine sandy loam, 0 to 1 percent slopes, frequently flooded	1.3	11.6%
214	San Joaquin loam, 0 to 1 percent slopes	4.8	42.9%
216	San Joaquin loam, 0 to 1 percent slopes, occasionally flooded	4.5	40.3%
254	WATER	0.6	5.2%
<b>Totals for Area of Interest</b>		<b>11.2</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

## Custom Soil Resource Report

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.



## Yuba County, California

### 139—Columbia fine sandy loam, 0 to 1 percent slopes, frequently flooded

#### Map Unit Setting

*National map unit symbol:* hg3z

*Elevation:* 10 to 150 feet

*Mean annual precipitation:* 18 to 22 inches

*Mean annual air temperature:* 61 to 63 degrees F

*Frost-free period:* 270 to 290 days

*Farmland classification:* Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

#### Map Unit Composition

*Columbia, fine sandy loam, and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Columbia, Fine Sandy Loam

##### Setting

*Landform:* Flood plains

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Mixed alluvium

##### Typical profile

*H1 - 0 to 9 inches:* fine sandy loam

*H2 - 9 to 18 inches:* fine sandy loam, sandy loam

*H2 - 9 to 18 inches:* stratified sand to silt loam

*H3 - 18 to 68 inches:*

##### Properties and qualities

*Slope:* 0 to 1 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 in/hr)

*Depth to water table:* About 36 to 60 inches

*Frequency of flooding:* FrequentNone

*Frequency of ponding:* None

*Available water capacity:* Moderate (about 7.2 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 4w

*Land capability classification (nonirrigated):* 4w

*Hydrologic Soil Group:* A

*Hydric soil rating:* Yes

### Minor Components

#### **Columbia, occasionally flooded**

*Percent of map unit:* 8 percent

*Landform:* Flood plains

*Hydric soil rating:* Yes

#### **Hollipah**

*Percent of map unit:* 7 percent

*Landform:* Flood plains

*Hydric soil rating:* Yes

## **214—San Joaquin loam, 0 to 1 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* hg6j

*Elevation:* 60 to 130 feet

*Mean annual precipitation:* 18 to 22 inches

*Mean annual air temperature:* 61 to 63 degrees F

*Frost-free period:* 270 to 290 days

*Farmland classification:* Not prime farmland

### **Map Unit Composition**

*San joaquin, loam, and similar soils:* 80 percent

*Minor components:* 20 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of San Joaquin, Loam**

#### **Setting**

*Landform:* Fan terraces

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Mixed alluvium

#### **Typical profile**

*H1 - 0 to 16 inches:* loam

*H2 - 16 to 25 inches:* clay

*H4 - 25 to 35 inches:* duripan

#### **Properties and qualities**

*Slope:* 0 to 1 percent

*Depth to restrictive feature:* More than 80 inches; 20 to 40 inches to duripan

*Drainage class:* Moderately well drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)

*Depth to water table:* More than 80 inches

## Custom Soil Resource Report

*Frequency of flooding:* Rare  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 1 percent  
*Available water capacity:* Very low (about 2.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* 4s  
*Land capability classification (nonirrigated):* 4s  
*Hydrologic Soil Group:* D  
*Ecological site:* R017XD079CA - CLAYPAN TERRACE  
*Hydric soil rating:* No

### Minor Components

#### Unnamed

*Percent of map unit:* 5 percent  
*Landform:* Depressions  
*Hydric soil rating:* Yes

#### Perkins

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

#### Unnamed

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

#### Redding

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

## 216—San Joaquin loam, 0 to 1 percent slopes, occasionally flooded

### Map Unit Setting

*National map unit symbol:* hg6l  
*Elevation:* 60 to 130 feet  
*Mean annual precipitation:* 18 to 22 inches  
*Mean annual air temperature:* 61 degrees F  
*Frost-free period:* 320 to 325 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*San joaquin, loam, and similar soils:* 92 percent  
*Minor components:* 8 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of San Joaquin, Loam

#### Setting

*Landform:* Fan terraces  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Tread

## Custom Soil Resource Report

*Microfeatures of landform position:* Swales, mounds  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Mixed alluvium

### Typical profile

*H1 - 0 to 16 inches:* loam  
*H2 - 16 to 25 inches:* clay  
*H4 - 25 to 35 inches:* duripan

### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches; 20 to 40 inches to duripan  
*Drainage class:* Well drained  
*Runoff class:* Very low  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* OccasionalNone  
*Frequency of ponding:* None  
*Available water capacity:* Very low (about 2.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* 4w  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* D  
*Hydric soil rating:* No

### Minor Components

#### Capay

*Percent of map unit:* 2 percent  
*Hydric soil rating:* No

#### Unnamed

*Percent of map unit:* 2 percent  
*Hydric soil rating:* No

#### Unnamed

*Percent of map unit:* 2 percent  
*Landform:* Depressions  
*Hydric soil rating:* Yes

#### Perkins

*Percent of map unit:* 2 percent  
*Hydric soil rating:* No

## 254—WATER

### Map Unit Composition

*Water:* 100 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

# References

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- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_054262](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262)
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053577](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577)
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053580](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580)
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2\\_053374](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374)
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

## Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2\\_054242](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242)

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053624](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624)

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_052290.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf)



## Appendix G. Representative Photographs



**Representative Photograph 1.** Representative of riparian habitat associated with Dry Creek at the 40 Mile Road pipe location.



**Representative Photograph 2.** Grassland habitat and location of existing pipe intake at the 40 Mile Road pipe location, north of Hoffman Plumas Road.





**Representative Photograph 3.** Riparian habitat, grassland, and Hoffman Plumas levee road at the 40 Mile Road pipe location.



**Representative Photograph 4.** Remnant oak woodland, ruderal vegetation, and 40 Mile Road.





**Representative Photograph 5.** Grassland, riparian habitat, and remnant oak woodland at the Gibbs Pond pipe location north of Hoffman Plumas Road. Note the existing concrete gate structure.



**Representative Photograph 6.** Dry, unnamed channel and associated riparian habitat at the Gibbs Pond pipe location north of Hoffman Plumas Road.





**Representative Photograph 7.** Grassland and riparian habitat located south of Hoffman Plumas Road at the Gibbs Pond pipe location.



**Representative Photograph 8.** Dry Creek stream channel and associated riparian habitat at the Gibbs Pond pipe location.



# **AQUATIC RESOURCE DELINEATION REPORT**

## **Reclamation District 817 Gibbs Pond and 40 Mile Road Pipe Repair Project Yuba County, California**



### **Prepared By:**

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### **Prepared For:**

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## Executive Summary

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Reclamation District (RD) 817 proposes to complete the Gibbs Pond and 40 Mile Road Pipeline Repair Project (Project), which would involve the replacement of two gravity-flow pipes that provide storm drain and irrigation drainage through the northern levee of Dry Creek in Yuba County, California. The Project is located where 40 Mile Road crosses Dry Creek approximately 2.75 east of State Route 70 and 3 miles west of the Town of Wheatland. The Project is within Section 11, Township 13 North, Range 4 East of the Mount Diablo Meridian within the United States Geological Survey (USGS) 7.5-minute quadrangles Sheridan and Nicolaus.

On behalf of RD 817, Dokken Engineering conducted a delineation of waters of the United States (U.S.) occurring in the approximately 12.04-acre Biological Study Area (BSA). The delineation was conducted on April 21, 2021. Delineation procedures followed the technical methods outlined in the Corps of Engineers Wetlands Delineation Manual (USACE 1987), Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008), and A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (Lichvar, 2008).

The field investigation confirmed that on-site aquatic resources are Dry Creek and an unnamed stream channel. A total of 0.76 acres (880 linear feet) of potential waters of the U.S. were mapped as stream channel within the BSA.



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## Acronyms and Abbreviations

BSA	Biological Study Area
DWR	Department of Water Resources
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	Ordinary high water mark
Project	Gibbs Pond and 40 Mile Road Pipeline Repair Project
RD	Reclamation District
U.S.	United States
USGS	United States Geological Survey

## Chapter 1. Introduction

---

Reclamation District (RD) 817 proposes to complete the Gibbs Pond and 40 Mile Road Pipeline Repair Project (Project), which would involve the replacement of two gravity-flow pipes that provide storm drain and irrigation drainage through the northern levee of Dry Creek in Yuba County, California. Both of the existing pipes have failed for differing reasons. The inspection report for the pipe at 40 Mile Road indicates voids in the pipe within the levee embankment where the fill around the pipe is exposed. The Department of Water Resources (DWR) has classified this pipe as “Urgent – Pipe Integrity Issue.” The inspection report for the pipe at Gibbs Pond indicates corrosion within the pipe and specifically at the outlet. Additionally, there is a section of pipe on the water side of the levee that is missing, which allows water to flow backwards towards the landside of the levee. The pipe currently drains a much larger volume of water than originally intended. This pipe is also identified as “Urgent – Pipe Integrity Issue.” Improvements at both pipes are proposed which would correct the existing issues.

The purpose of this report is to identify and describe aquatic resources in the Biological Study Area (BSA).

This report facilitates efforts to:

1. Avoid or minimize impacts to aquatic resources during the Project design process.
2. Document aquatic resource boundary determinations for review by regulatory authorities.
3. Provide background information regarding aquatic resources in the BSA.

## Chapter 2. Location

---

The Project is located where 40 Mile Road crosses Dry Creek approximately 2.75 miles east of State Route 70 and 3 miles west of the Town of Wheatland. The Project is within Section 11, Township 13 North, Range 4 East of the Mount Diablo Meridian within the United States Geological Survey (USGS) 7.5-minute quadrangles Sheridan and Nicolaus (**Appendix B. Vicinity Map; Appendix B. Location Map**). The BSA is within the Sacramento Valley bioregion of the Great Central Valley region of the California Floristic Province (Jepson 2021).

The Project's BSA was defined as the area necessary for all Project activities, plus an additional 20-foot buffer to accommodate for staging and access and any potential changes to Project design. The BSA is approximately 12.04 acres in area (**Appendix B. Biological Study Area Map**).

## Chapter 3. Methods

---

The jurisdictional delineation was conducted by Dokken Engineering biologists Scott Salembier and Clare Favro on April 21, 2021. The purpose of the survey was to identify and delineate aquatic resources present within the proposed Project area. The field investigation was conducted in accordance with technical methods outlined in the Corps of Engineers Wetlands Delineation Manual (USACE 1987), Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008), and A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (Lichvar 2008). The observed OHWM was mapped in the field with a Trimble R1 GPS Unit and ESRI Collector software.

## Chapter 4. Existing Conditions

---

### 4.1 Landscape Setting

The BSA is within the Sacramento Valley bioregion of the Great Central Valley region of the California Floristic Province (Jepson 2021). This bioregion is predominately agricultural, with grasslands, marshes, vernal pools, riparian woodlands, alkali sink vegetation, and valley oak woodlands throughout. It has slightly cooler, wetter conditions than its southern counterpart, the San Joaquin Valley. Weather conditions include warm, dry summers and cool, wet winters. The average annual high temperature of the region is 76 degrees Fahrenheit, with summer highs reaching on average 96 degrees Fahrenheit. The average annual low is 49 degrees Fahrenheit. Winters reach average temperatures as low as 38 degrees, with an average annual precipitation of approximately 22 inches in the form of rain (U.S. Climate Data 2021).

The natural topography of the BSA is relatively flat, with the exception of human-built roads, which are constructed on raised levees for flood safety and control purposes. The elevation of the BSA ranges from approximately 55 to 70 feet above mean sea level. Topographical features within and immediately adjacent to the BSA include Dry Creek, Hoffman Plumas Road, and 40 Mile Road (**Appendix B. Topographic Map**).

According to the Natural Resources Conservation Service (NRCS), soil within the Project area consists of Columbia fine sandy loam, 0 to 1 percent slopes, frequently flooded, San Joaquin loam, 0 to 1 percent slopes, and San Joaquin loam, 0 to 1 percent slopes, occasionally flooded (NRCS 2021; **Appendix B. NRCS Web Soil Survey Report**).

### 4.2 Land Cover

The following natural vegetation communities and developed land cover types were identified within the BSA (**Appendix B. Land Cover Types within the Biological Study Area Map; Appendix C: Representative Photographs**).

#### 4.2.1 Natural Vegetation Communities

Natural vegetation communities within the BSA include annual grassland, riparian, remnant oak woodland, and ruderal habitat (**Appendix D. Plant Species Observed**).

##### Annual Grassland

Annual grassland habitat is composed of a variety of annual grass species, the majority of which are non-native and invasive. Such species observed within the BSA include foxtail barley (*Hordeum murinum*), Italian ryegrass (*Festuca perennis*), ripgut brome (*Bromus diandrus*), and soft chess (*Bromus hordeaceus*). In addition to grasses, this habitat type supports numerous forbs such as Ithuriel's spear (*Triteleia laxa*), hawkbit (*Leontodon saxatilis*), Italian thistle (*Carduus pycnocephalus*), and field bindweed (*Convolvulus arvensis*). Annual grassland habitat makes up 7.53 acres of the BSA (~63%).

##### Riparian

Riparian habitat occurs within the entire BSA along the edges of Dry Creek and adjacent to the unnamed drainage channel located at the Gibbs Pond site. Riparian vegetation within the BSA is characterized as a denser, mesic set of trees, shrubs, and forbs associated with a nearby aquatic



resource. Within this habitat, plant species such as narrow leaf willow (*Salix exigua*), poison oak (*Toxicodendron diversilobum*), and curly dock (*Rumex crispus*) can be found. Riparian vegetation is an important habitat component, as it supports a wide diversity of plant and wildlife species and acts as a key part of habitat connectivity and migratory corridors. Riparian habitat covers approximately 1.02 acres (~8%) of the BSA.

#### Remnant Oak Woodland

Within the BSA, there are small patches of remnant oak woodland habitat. This habitat type is recognizable by a canopy of valley oak (*Quercus lobata*) and interior live oak (*Q. wislizeni*) and an understory with shrubby species such as Himalayan blackberry (*Rubus armeniacus*). Within the BSA, oak woodland is marginal and disturbed, likely remnants from the oak woodlands that would have dominated the landscape prior to the area's agricultural development. Remnant oak woodland encompasses approximately 0.78 acres (~6%) of the BSA.

#### Ruderal

Ruderal vegetation occurs within the BSA along the edges of 40 Mile Road, where weedy grasses and forbs occur in between the margins of developed and natural habitat types. Such species include blessed milk thistle (*Silybum marianum*), Italian thistle, and cutleaf geranium (*Geranium dissectum*). Ruderal vegetation covers approximately 0.20 acres (~2% of the BSA).

#### Seasonal Wetland

A small area of seasonal wetland was visually identified within the BSA at the 40 Mile Road pipeline location. The wetland is classified as PEM1C on the NWI, indicating a persistent, seasonally flooded wetland within a palustrine system with emergent vegetation present (NWI 2021). Seasonal wetland encompasses approximately 0.20 acres of the BSA (~3%). As this seasonal wetland would not be impacted by the Project, a jurisdictional delineation was not conducted on this feature.

#### *4.2.2 Developed Lands*

Developed land cover types within the BSA include urban/barren land and agriculture.

#### Urban/Barren

Urban and barren land within the BSA includes developed or compacted land that is devoid of vegetation. This consists of the paved roadways (40 Mile Road), gravel levee roads (Hoffman Plumas Road), and barren road shoulders adjacent to these areas. Urban and barren road covers approximately 1.77 acres (~15% of the BSA).

#### Agriculture

Agricultural land makes up the majority of the land use surrounding the BSA. Within the BSA itself, agriculture composes approximately 0.17 acres (~1% of the BSA). Agricultural fields in this area include rice fields, orchards, and grain crops. Agricultural land supports minimal native vegetation but can act as habitat for native wildlife species, particularly birds and small mammals. However, this land is regularly disturbed by human use and is not expected to provide pristine, preferred habitat for these species.

## 4.3 Aquatic Resources

### 4.3.1 Overview

Based on field survey results, the USGS Sheridan and Nicolaus 7.5-minute quadrangle topographic maps, and the National Wetlands Inventory (NWI), the aquatic resources within the BSA are Dry Creek and an unnamed tributary.

### 4.3.2 Aquatic Features Survey Results

#### Stream Channel

There are two instances of stream channel habitat within the BSA; Dry Creek and an unnamed intermittent stream channel. In total, stream channel habitat makes up approximately 0.37 acres (~3%) of the BSA.

Approximately 0.21 acres (390 linear feet) of Dry Creek are present within the BSA. Dry Creek is a natural stream channel, identified as Cowardin classification system R4SBC, an intermittent, seasonally flooded streambed within the riverine system by the National Wetlands Inventory (NWI 2021). Dry Creek has direct connectivity to Bear River approximately 1.2 miles southwest of the BSA. Bear River is considered a traditional navigable water of the U.S. and with direct connectivity, Dry Creek would also be considered a jurisdictional water of the U.S., water of the State, and CDFW jurisdictional habitat.

In addition to Dry Creek, the BSA contains 0.16 acres (380 linear feet) of a small, unnamed drainage feature that is a tributary to Dry Creek. This unnamed stream channel is a small drainage channel with surface water originating at an existing pipe outfall location north of Hoffman Plumas Road. This channel is classified as Cowardin classification system R5UBFx by the NWI, indicating that it is an excavated semi permanently flooded, unknown perennial riverine channel with an unconsolidated bottom (NWI 2021). The unnamed channel is intermittent, appears to have been excavated in otherwise dry land, and serves as a drainage from Gibbs Pond (north of the BSA) into Dry Creek. As an intermittent stream with connectivity to the jurisdictional Dry Creek, this unnamed stream channel is considered a jurisdictional water of the U.S., water of the State, and CDFW jurisdictional habitat.

The Aquatic Resources Delineation Map illustrates jurisdictional boundaries within the Project area. (**Appendix A. Aquatic Resources Delineation Map**).

**Table 1: Aquatic Resources within the Survey Area**

Site Coordinates	Aquatic Resource	Cowardin*	Aquatic Resource Size (acre)	Aquatic Resource Size (linear feet)
38.990645 N -121.499853 W	Dry Creek (SC-1)	R4SBC	0.21	390
38.991288 N -121.500047 W	Unnamed Stream Channel (SC-2)	R5UBFx	0.16	380
<b>Total</b>			<b>0.37</b>	<b>770</b>

\*Cowardin et al. 1979

## Chapter 5. References

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- Cowardin et al. 1979      Cowardin et al. 1979. Classification of Wetlands and Deepwater Habitats of the United States.
- Jepson 2021              The Jepson Herbarium. 2021. Jepson eFlora. Available at: <<https://ucjeps.berkeley.edu/eflora/>> (accessed 6/2/2021).
- Lichvar 2008              Lichvar, R. W and McColley, S.M. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual. United States Army Corps of Engineers Engineer Research and Development Center.
- NRCS 2021                Natural Resources Conservation Service. 2021. Web Soil Survey. Available at: <<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>> (accessed 5/4/2021).
- NWI 2021                  National Wetlands Inventory. 2021. Wetlands Mapper. Available at: <<https://www.fws.gov/wetlands/data/mapper.html>> (accessed 6/2/2021).
- U.S. Climate Data 2021      U.S. Climate Data. 2021. Climate Marysville – California. Available at: <<https://www.usclimatedata.com/climate/marysville/california/united-states/usca0676>> (accessed 6/2/2021).
- USACE 1987                United States Army Corps of Engineers. 1987. Corps of Engineers Wetland Delineation Manual. Environmental Laboratory, U.S. Army Corps of Engineers Waterways Experiment Station.
- USACE 2008                United States Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). United States Army Engineer Research and Development Center, Vicksburg, Mississippi.

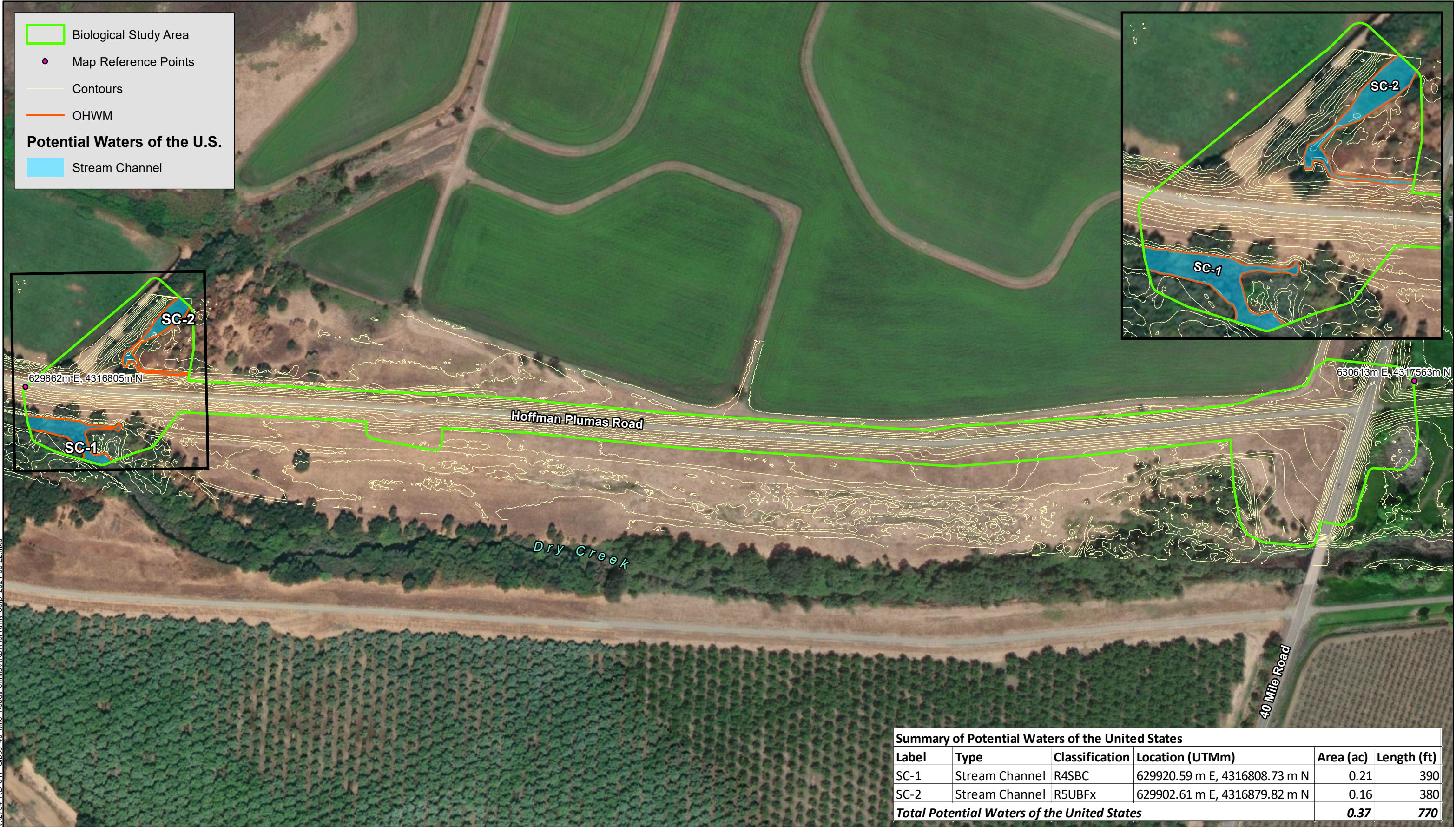


## **Appendix A – Aquatic Resource Delineation Map**

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V:\2794\_RD\_817\_Gibbs\_40\_Mile\_Road\Permits\ARDR for Army Corp\_2021-06-22.mxd

Coordinate System: NAD 1983 UTM Zone 10  
Projection: Transverse Mercator  
Datum: North American 1983

1 inch = 225 feet

0 150 300 450 600 Feet

Prepared by:

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Prepared for:

Reclamation District 817  
P.O. Box 261  
Wheatland, CA 95692

Delineator: Scott Salembier, Clare Favro  
Delineation Date: April 21, 2021  
Aerial Photography Source: ESRI Maps Online, 2016  
This delineation of water of the United States is subject to verification by the U.S. Army Corps of Engineers (Corps).  
Dokken Engineering advises all parties that the delineation is preliminary until the Corps provides a written verification.

**Aquatic Resource Delineation Map**  
RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California





## **Appendix B - Supporting Resources**

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**Vicinity Map**

**Location Map**

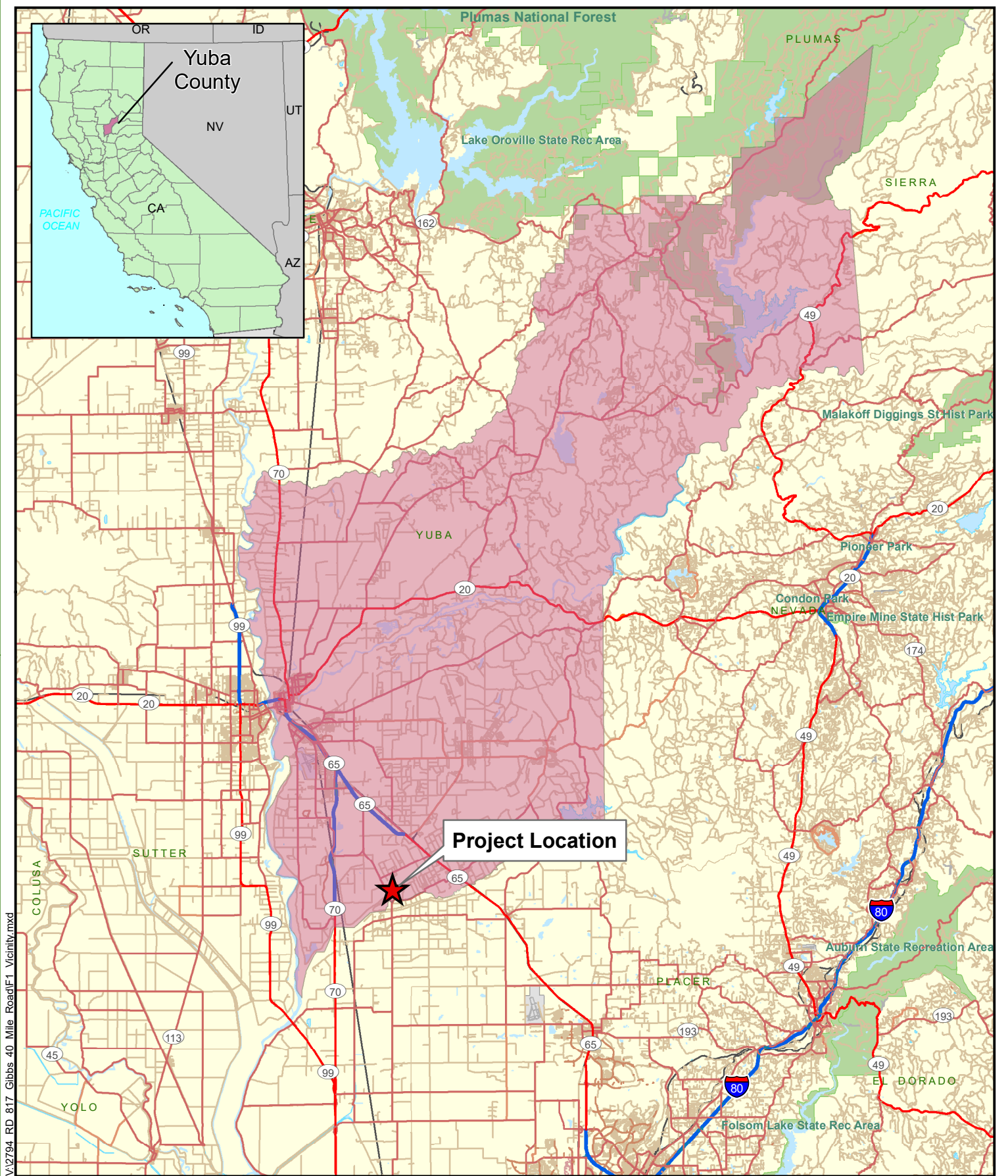
**Biological Study Area Map**

**Land Cover Types within the Biological Study Area Map**

**Topographic Map**

**NRCS Web Soil Survey Report**





**Figure 1**  
**Project Vicinity**

RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California



0 5 10 15 Miles



Source: ESRI World Street Maps Online; Dokken Engineering 7/13/2021; Created By: cfavro



0 0.25 0.5 0.75 1 Miles

**Figure 2**  
**Project Location**  
RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California



V:\2794 RD 817 Gibbs 40 Mile Road\Biology\F3\_BSA\_2021-06-28.mxd

Project Area

Biological Study Area

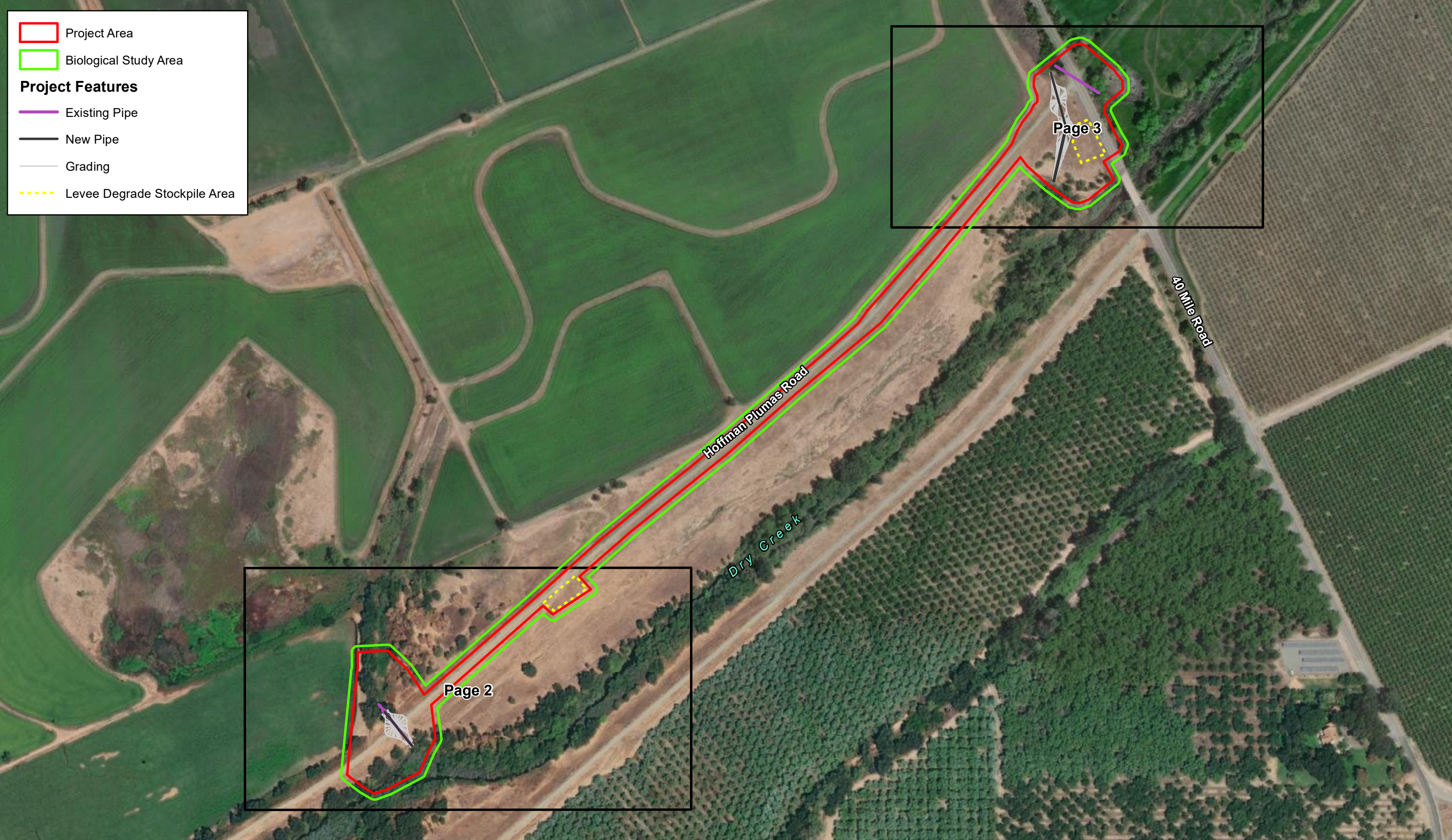
**Project Features**

Existing Pipe

New Pipe

Grading

Levee Degrade Stockpile Area



Source: ESRI Maps Online; Dokken Engineering 6/28/2021; Created By: cfavro

N

1 inch = 300 feet

0

300

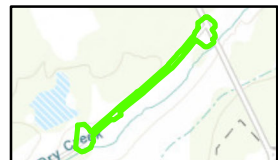
600

900

1,200

1,500

Feet



**Figure 3**  
**Project Features**  
**Page 1 of 3**

RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California







V:\2794 RD 817 Gibbs 40 Mile Road\Biology\F3\_BSA\_2021-06-28.mxd



Source: ESRI Maps Online; Dokken Engineering 6/28/2021; Created By: cfavro



1 inch = 100 feet



**Figure 3**  
**Project Features**  
**Page 2 of 3**  
RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California







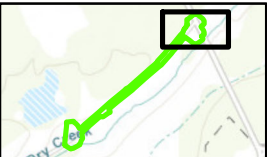


V:\2794 RD 817 Gibbs 40 Mile Road\Biologv\F3\_BSA\_2021-06-28.mxd

Source: ESRI Maps Online; Dokken Engineering 6/28/2021; Created By: cfavro



1 inch = 75 feet

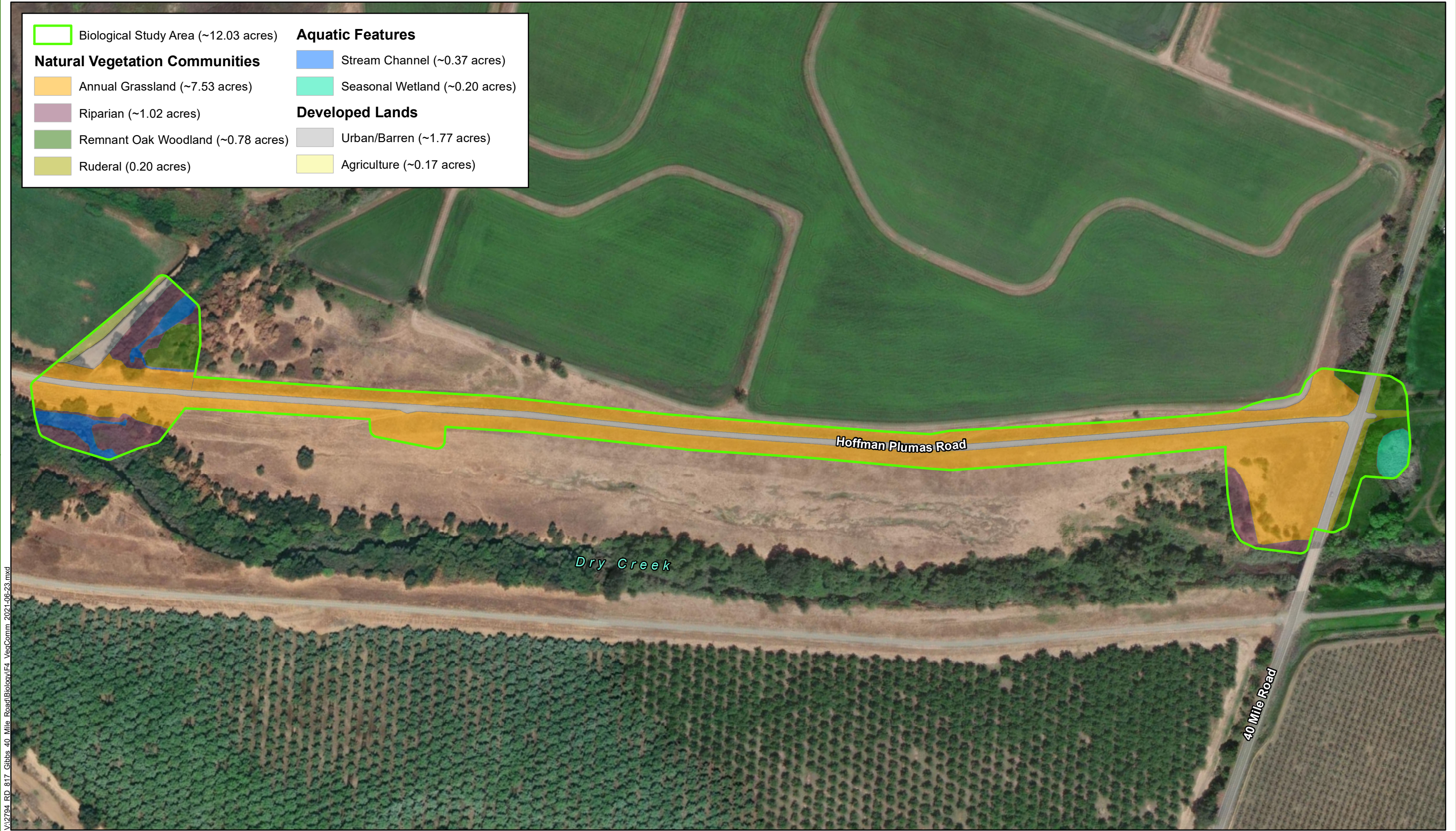


**Figure 3**  
**Project Features**  
**Page 3 of 3**  
RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California









V:\2794 RD 817 Gibbs 40 Mile Road\Biology\F4\_VecComm\_2021-06-23.mxd

Source: ESRI Maps Online; Dokken Engineering 6/28/2021; Created By: cfavro



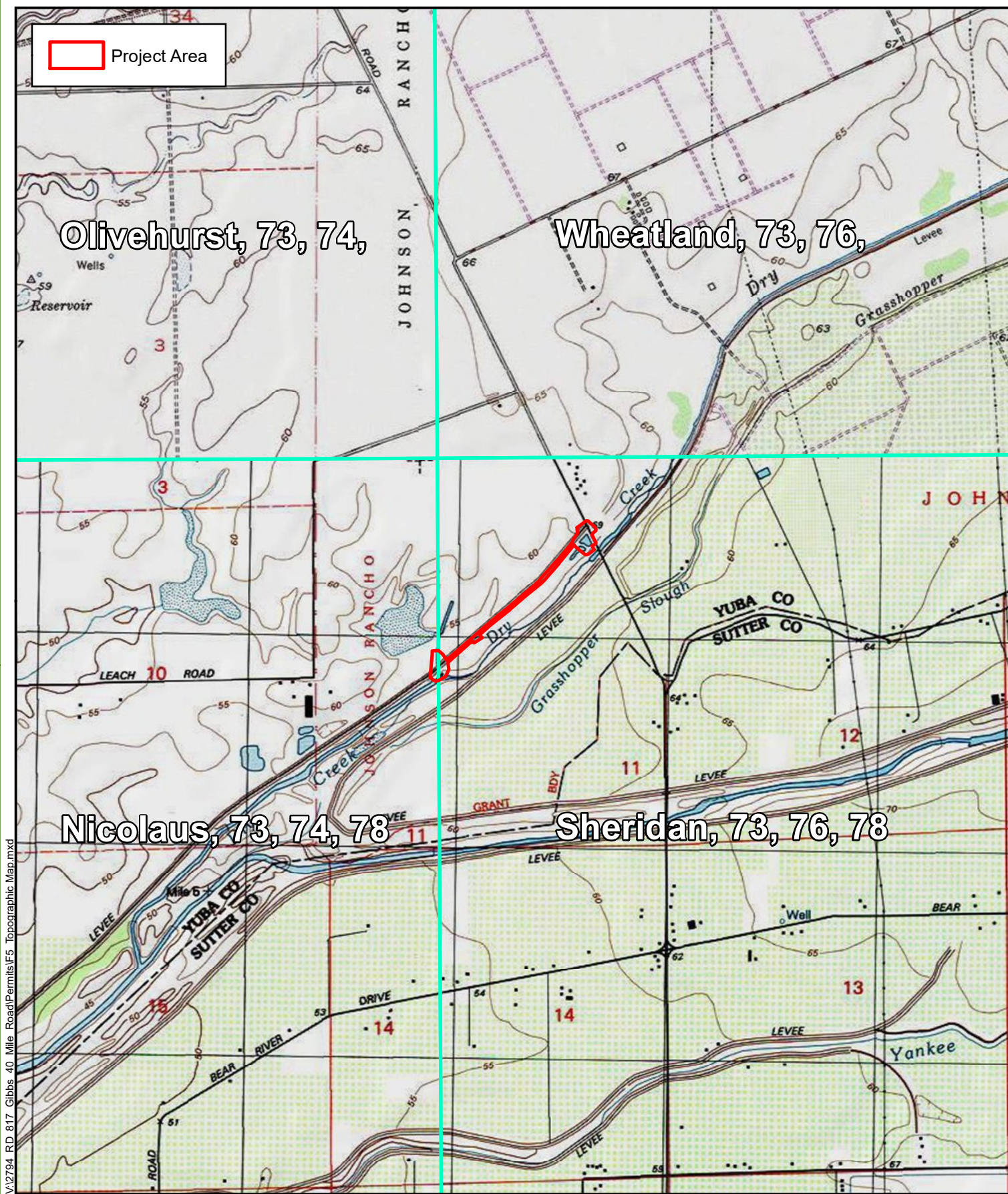
1 inch = 225 feet

0 225 450 675 900 1,125 Feet

**Figure 4**  
**Land Cover Types within the Biological Study Area**  
RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
Yuba County, California







V:\2794 RD 817 Gibbs Pond 40 Mile Road\Permits\F5 Topographic Map.mxd

Source: USA Topo Maps Online; Dokken Engineering 7/13/2021; Created By: cfavro



0 0.5 1 Miles

**Figure 5**  
**Topographic Map**  
 USGS 7.5-minute Quads: Nicolaus and Sheridan  
 RD 817 Gibbs Pond and 40 Mile Road Pipe Repair Project  
 Yuba County, California







United States  
Department of  
Agriculture

NRCS

Natural  
Resources  
Conservation  
Service

A product of the National  
Cooperative Soil Survey,  
a joint effort of the United  
States Department of  
Agriculture and other  
Federal agencies, State  
agencies including the  
Agricultural Experiment  
Stations, and local  
participants

# Custom Soil Resource Report for Yuba County, California





# Preface

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Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist ([http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2\\_053951](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951)).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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# How Soil Surveys Are Made

---

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and



## Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

---

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

# Custom Soil Resource Report Soil Map



Map Scale: 1:6,690 if printed on A portrait (8.5" x 11") sheet.

0 50 100 200 300 Meters


0 300 600 1200 1800 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

# Custom Soil Resource Report

## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot


 Sinkhole


 Slide or Slip


 Sodic Spot


 Spoil Area

 Stony Spot


 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

### Water Features

 Streams and Canals


### Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Yuba County, California  
Survey Area Data: Version 14, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
139	Columbia fine sandy loam, 0 to 1 percent slopes, frequently flooded	1.3	11.6%
214	San Joaquin loam, 0 to 1 percent slopes	4.8	42.9%
216	San Joaquin loam, 0 to 1 percent slopes, occasionally flooded	4.5	40.3%
254	WATER	0.6	5.2%
<b>Totals for Area of Interest</b>		<b>11.2</b>	<b>100.0%</b>

## Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.



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The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

## Yuba County, California

### 139—Columbia fine sandy loam, 0 to 1 percent slopes, frequently flooded

#### Map Unit Setting

*National map unit symbol:* hg3z

*Elevation:* 10 to 150 feet

*Mean annual precipitation:* 18 to 22 inches

*Mean annual air temperature:* 61 to 63 degrees F

*Frost-free period:* 270 to 290 days

*Farmland classification:* Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

#### Map Unit Composition

*Columbia, fine sandy loam, and similar soils:* 85 percent

*Minor components:* 15 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Columbia, Fine Sandy Loam

##### Setting

*Landform:* Flood plains

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Mixed alluvium

##### Typical profile

*H1 - 0 to 9 inches:* fine sandy loam

*H2 - 9 to 18 inches:* fine sandy loam, sandy loam

*H2 - 9 to 18 inches:* stratified sand to silt loam

*H3 - 18 to 68 inches:*

##### Properties and qualities

*Slope:* 0 to 1 percent

*Depth to restrictive feature:* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (Ksat):* High (1.98 to 5.95 in/hr)

*Depth to water table:* About 36 to 60 inches

*Frequency of flooding:* FrequentNone

*Frequency of ponding:* None

*Available water capacity:* Moderate (about 7.2 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 4w

*Land capability classification (nonirrigated):* 4w

*Hydrologic Soil Group:* A

*Hydric soil rating:* Yes

**Minor Components**

**Columbia, occasionally flooded**

*Percent of map unit:* 8 percent

*Landform:* Flood plains

*Hydric soil rating:* Yes

**Hollipah**

*Percent of map unit:* 7 percent

*Landform:* Flood plains

*Hydric soil rating:* Yes

**214—San Joaquin loam, 0 to 1 percent slopes**

**Map Unit Setting**

*National map unit symbol:* hg6j

*Elevation:* 60 to 130 feet

*Mean annual precipitation:* 18 to 22 inches

*Mean annual air temperature:* 61 to 63 degrees F

*Frost-free period:* 270 to 290 days

*Farmland classification:* Not prime farmland

**Map Unit Composition**

*San joaquin, loam, and similar soils:* 80 percent

*Minor components:* 20 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

**Description of San Joaquin, Loam**

**Setting**

*Landform:* Fan terraces

*Landform position (two-dimensional):* Toeslope

*Landform position (three-dimensional):* Tread

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Mixed alluvium

**Typical profile**

*H1 - 0 to 16 inches:* loam

*H2 - 16 to 25 inches:* clay

*H4 - 25 to 35 inches:* duripan

**Properties and qualities**

*Slope:* 0 to 1 percent

*Depth to restrictive feature:* More than 80 inches; 20 to 40 inches to duripan

*Drainage class:* Moderately well drained

*Runoff class:* Very low

*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)

*Depth to water table:* More than 80 inches

## Custom Soil Resource Report

*Frequency of flooding:* Rare  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 1 percent  
*Available water capacity:* Very low (about 2.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* 4s  
*Land capability classification (nonirrigated):* 4s  
*Hydrologic Soil Group:* D  
*Ecological site:* R017XD079CA - CLAYPAN TERRACE  
*Hydric soil rating:* No

### Minor Components

#### Unnamed

*Percent of map unit:* 5 percent  
*Landform:* Depressions  
*Hydric soil rating:* Yes

#### Perkins

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

#### Unnamed

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

#### Redding

*Percent of map unit:* 5 percent  
*Hydric soil rating:* No

## 216—San Joaquin loam, 0 to 1 percent slopes, occasionally flooded

### Map Unit Setting

*National map unit symbol:* hg6l  
*Elevation:* 60 to 130 feet  
*Mean annual precipitation:* 18 to 22 inches  
*Mean annual air temperature:* 61 degrees F  
*Frost-free period:* 320 to 325 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*San joaquin, loam, and similar soils:* 92 percent  
*Minor components:* 8 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of San Joaquin, Loam

#### Setting

*Landform:* Fan terraces  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Tread

## Custom Soil Resource Report

*Microfeatures of landform position:* Swales, mounds  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Mixed alluvium

### Typical profile

*H1 - 0 to 16 inches:* loam  
*H2 - 16 to 25 inches:* clay  
*H4 - 25 to 35 inches:* duripan

### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches; 20 to 40 inches to duripan  
*Drainage class:* Well drained  
*Runoff class:* Very low  
*Capacity of the most limiting layer to transmit water (Ksat):* Very low to moderately low (0.00 to 0.06 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* OccasionalNone  
*Frequency of ponding:* None  
*Available water capacity:* Very low (about 2.4 inches)

### Interpretive groups

*Land capability classification (irrigated):* 4w  
*Land capability classification (nonirrigated):* 4w  
*Hydrologic Soil Group:* D  
*Hydric soil rating:* No

### Minor Components

#### Capay

*Percent of map unit:* 2 percent  
*Hydric soil rating:* No

#### Unnamed

*Percent of map unit:* 2 percent  
*Hydric soil rating:* No

#### Unnamed

*Percent of map unit:* 2 percent  
*Landform:* Depressions  
*Hydric soil rating:* Yes

#### Perkins

*Percent of map unit:* 2 percent  
*Hydric soil rating:* No

## 254—WATER

### Map Unit Composition

*Water:* 100 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*





# References

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- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_054262](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262)
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053577](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577)
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053580](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580)
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2\\_053374](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374)
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

## Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2\\_054242](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242)

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053624](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624)

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_052290.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf)



## Appendix C – Representative Photographs

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**Representative Photograph 1.** Representative of riparian habitat associated with Dry Creek at the 40 Mile Road pipe location.



**Representative Photograph 2.** Grassland habitat and location of existing pipe intake at the 40 Mile Road pipe location, north of Hoffman Plumas Road.





**Representative Photograph 3.** Riparian habitat, grassland, and Hoffman Plumas levee road at the 40 Mile Road pipe location.



**Representative Photograph 4.** Remnant oak woodland, ruderal vegetation, and 40 Mile Road.





**Representative Photograph 5.** Grassland, riparian habitat, and remnant oak woodland at the Gibbs Pond pipe location north of Hoffman Plumas Road. Note the existing concrete gate structure.



**Representative Photograph 6.** Dry, unnamed channel and associated riparian habitat at the Gibbs Pond pipe location north of Hoffman Plumas Road.





**Representative Photograph 7.** Grassland and riparian habitat located south of Hoffman Plumas Road at the Gibbs Pond pipe location.



**Representative Photograph 8.** Dry Creek stream channel and associated riparian habitat at the Gibbs Pond pipe location.

## Appendix D – Plant Species Observed

### Plant Species Observed Table

The table below includes a list of plant species observed within the BSAs during biological field surveys. No special-status plant species were observed.

Common Name	Scientific Name	Native (N)/Non-Native (X) [Cal-IPC Invasive Rating]
<b>40 Mile Road</b>		
<b>Herbs</b>		
Blessed milk thistle	<i>Silybum marianum</i>	X [limited]
Blue dicks	<i>Dipterostemon capitatus</i>	N
California mugwort	<i>Artemisia douglasiana</i>	N
Canada horseweed	<i>Erigeron canadensis</i>	N
Curly dock	<i>Rumex crispus</i>	X [limited]
Cut leaf geranium	<i>Geranium dissectum</i>	X [limited]
Field bindweed	<i>Convolvulus arvensis</i>	X
Hairy vetch	<i>Vicia villosa</i>	X
Hawkbit	<i>Leontodon saxatilis</i>	X
Italian thistle	<i>Carduus pycnocephalus</i>	X [moderate]
Ithuriel's spear	<i>Triteleia laxa</i>	N
Longbeak stork's-bill	<i>Erodium botrys</i>	X
Mustard	<i>Brassica sp.</i>	X
Narrow leaf mule ears	<i>Wyethia angustifolia</i>	N
Poison hemlock	<i>Conium maculatum</i>	X [moderate]
Red stemmed filaree	<i>Erodium cicutarium</i>	X [limited]
Rose clover	<i>Trifolium hirtum</i>	X [limited]
Stinking chamomile	<i>Anthemis cotula</i>	X
Wall bedstraw	<i>Gallium parisiense</i>	N
Wild hyacinth	<i>Triteleia hyacinthina</i>	N
Wild radish	<i>Raphanus sativus</i>	X [limited]
<b>Grasses</b>		
Blue wild rye	<i>Elymus glaucus ssp. glaucus</i>	N
Foxtail barley	<i>Hordeum murinum</i>	X [moderate]
Foxtail brome	<i>Bromus madritensis</i>	X
Italian ryegrass	<i>Festuca perennis</i>	X [moderate]
Medusa head	<i>Elymus caput-medusae</i>	X [high]
Ripgut brome	<i>Bromus diandrus</i>	X [moderate]
Soft chess	<i>Bromus hordeaceus</i>	X [limited]
Wild oat	<i>Avena fatua</i>	X [moderate]
<b>Shrubs</b>		
California wild rose	<i>Rosa californica</i>	N
Himalayan blackberry	<i>Rubus armeniacus</i>	X [high]
<b>Trees</b>		
Interior live oak	<i>Quercus wislizeni</i>	N
Narrow leaf willow	<i>Salix exigua</i>	N
Oregon ash	<i>Fraxinus latifolia</i>	N
Valley oak	<i>Quercus lobata</i>	N

Common Name	Scientific Name	Native (N)/Non-Native (X) [Cal-IPC Invasive Rating]
<b>Gibbs Pond</b>		
<b>Herbs</b>		
Curly dock	<i>Rumex crispus</i>	X [limited]
Cut leaf geranium	<i>Geranium dissectum</i>	X [limited]
Field bindweed	<i>Convolvulus arvensis</i>	X
Hairy vetch	<i>Vicia villosa</i>	X
Italian thistle	<i>Carduus pycnocephalus</i>	X [moderate]
Longbeak stork's-bill	<i>Erodium botrys</i>	X
Ripwort plantain	<i>Plantago lanceolata</i>	X [limited]
Wall bedstraw	<i>Gallium parisiense</i>	N
Western ragweed	<i>Ambrosia psilostachya</i>	N
Wild teasel	<i>Dipsacus fullonum</i>	X [moderate]
<b>Grasses</b>		
California bulrush	<i>Schoenoplectus californicus</i>	N
Common rush	<i>Juncus effusus</i>	N
Foxtail barley	<i>Hordeum murinum</i>	X [moderate]
Italian ryegrass	<i>Festuca perennis</i>	X [moderate]
Medusa head	<i>Elymus caput-medusae</i>	X [high]
Mexican rush	<i>Juncus mexicanus</i>	N
Ripgut brome	<i>Bromus diandrus</i>	X [moderate]
Soft chess	<i>Bromus hordeaceus</i>	X [limited]
Wild oat	<i>Avena fatua</i>	X [moderate]
<b>Shrubs</b>		
California wild rose	<i>Rosa californica</i>	N
Himalayan blackberry	<i>Rubus armeniacus</i>	X [high]
Poison oak	<i>Toxicodendron diversilobum</i>	N
<b>Trees</b>		
Interior live oak	<i>Quercus wislizeni</i>	N
Narrow leaf willow	<i>Salix exigua</i>	N
Oregon ash	<i>Fraxinus latifolia</i>	N
Valley oak	<i>Quercus lobata</i>	N



## **Appendix C:**

# **Mitigation Monitoring and Reporting Program**

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## MITIGATION MONITORING AND REPORTING PROGRAM FOR THE RD 817 GIBBS POND AND 40 MILE ROAD PIPE REPAIR PROJECT

BEST MANAGEMENT PRACTICES	Reporting Milestone	Reporting / Responsible Party	VERIFICATION OF COMPLIANCE	
			Initials	Date
AIR QUALITY				
<p><b>AQ-1:</b> Prior to construction, the project proponent or project contractor shall obtain an approved FRAQMD Authority to Construct Permit, an approved fugitive dust control plan, and shall implement applicable FRAQMD BMPs.</p> <ul style="list-style-type: none"><li>• Implement the Fugitive Dust Control Plan.</li><li>• Construction equipment exhaust emissions shall not exceed FRAQMD Regulation III, Rule 3.0, Visible Emissions limitations (40 percent opacity or Ringleman 2.0).</li><li>• The contractor shall be responsible to ensure that all construction equipment is properly tuned and maintained prior to and for the duration of onsite operation.</li><li>• Limiting idling time to 5 minutes – saves fuel and reduces emissions.</li><li>• Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.</li><li>• Develop a traffic plan to minimize traffic flow interference from construction activities. The plan may include advance public notice of routing, use of public transportation, and satellite parking areas within a shuttle service. Schedule operations affecting traffic to off-peak hours. Minimize obstruction of through-traffic lanes. Provide a flag person to guide traffic properly and ensure safety at construction sites.</li><li>• Portable engines and portable engine-driven equipment units used at the project work site, with exception of on-road and off-road motor vehicles, may require California Air Resources Board (CARB) Portable Equipment Registration with the State or a local district permit. The owner/operator shall be responsible for arranging appropriate consultations with the CARB or the district to determine registration and permitting requirements prior to equipment operation at the site.</li></ul>	Prior to and During Construction	RD817 and/or Contractor		
BIOLOGICAL RESOURCES				
<p><b>BIO-1:</b> Contract specifications will include the following biological BMPs:</p> <ul style="list-style-type: none"><li>• Existing vegetation shall be protected to the greatest extent feasible in order to reduce erosion and sedimentation.</li></ul>	During and Post Construction	Contractor		

<ul style="list-style-type: none"> <li>Exposed soils shall be covered by loose bulk materials or other materials to reduce erosion and runoff during rainfall events.</li> <li>Exposed soils shall be stabilized through watering or other measures on order to prevent the movement of dust at the project site caused by wind and construction activities such as traffic and grading activities.</li> <li>All concrete curing activities would be conducted in a manner that would minimize spray drift and prevent curing compounds from entering the waterway directly or indirectly.</li> <li>All construction materials, vehicles, stockpiles, and staging areas would be situated as far outside of the stream channel as feasible. All stockpiles would be covered as completely as feasible.</li> <li>All erosion control measures and storm water control measures would be properly maintained until final grading has been completed and permanent erosion control measures are implemented.</li> <li>All disturbed areas would be restored to pre-construction contours and revegetated with native or approved non-invasive exotic species, where applicable, either through hydroseeding or other means.</li> <li>All construction materials would be hauled off-site after completion of construction.</li> </ul>				
<b>BIO-2:</b> Prior to the start of construction activities, the project limits that are in proximity to sensitive natural habitats must be marked with high visibility Environmentally Sensitive Area (ESA) fencing or staking to ensure construction will not further encroach into waters or sensitive habitats. The project biologist will periodically inspect the ESA to ensure that sensitive locations remain undisturbed.	Prior to and During Construction	Contractor		
<b>BIO-3:</b> Refueling or maintenance of equipment without secondary containment shall not be permitted to occur within 100 feet of stream channels. All refueling and maintenance that must occur within 100 feet of stream channels must occur over plastic sheeting or other secondary containment measures in order to capture accidental spills before they can contaminate the soil. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).	During Construction	Contractor		
<b>BIO-4:</b> Equipment will be checked daily for leaks and will be well-maintained to prevent lubricants and any other deleterious materials from entering stream channels and associated riparian areas.	During Construction	Contractor		
<b>BIO-5:</b> Vehicle maintenance, staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants must remain outside of sensitive habitat areas marked with high-visibility fencing. Any necessary equipment washing must occur where the water cannot flow into sensitive habitat communities.	During Construction	Contractor		

<b>BIO-6:</b>	A chemical spill kit must be kept on-site and available for use in the event of a spill.	During Construction	Contractor		
<b>BIO-7:</b>	Secondary containment consisting of plastic sheeting or other impermeable sheeting shall be installed underneath all stationary equipment to prevent petroleum products or other chemicals from contaminating the soil and/or from spilling directly into stream channels. Secondary containment must have a raised edge (e.g., sheeting wrapped around wattles).	During Construction	Contractor		
<b>BIO-8:</b>	Prior to arrival at the project site and prior to leaving the project site, construction equipment that may contain invasive plants and/or seeds will be cleaned to reduce the spreading of noxious weeds.	During Construction	Contractor		
<b>BIO-9:</b>	Hydroseed and plant mixes to be used during or post-construction must consist of a biologist-approved plant palette seed mix of regionally-appropriate native species.	During and Post Construction	Contractor		
<b>BIO-10:</b>	Clearing and grubbing will be accomplished at a maximum speed of three (3) miles per hour to allow wildlife enough time to escape the project area.	During Construction	Contractor		
<b>BIO-11:</b>	The contractor must dispose of all food-related trash in closed containers and must remove it from the project area each day during construction. Construction personnel must not feed or attract wildlife to the project area.	During Construction	Contractor		
<b>BIO-12:</b>	The contractor must not apply rodenticide or herbicide within the project area.	During Construction	Contractor		
<b>HAZARDS AND HAZARDOUS MATERIALS</b>					
<b>HAZ-1:</b>	The project proponent or project contractor shall prepare a Spill Prevention, Control, and Countermeasure Plan (SPCCP) prior to the commencement of construction activities. The SPCCP shall include information on the nature of all hazardous materials that shall be used on-site. The SPCCP shall also include information regarding proper handling of hazardous materials and clean-up procedures in the event of an accidental release. The phone number of the agency overseeing hazardous materials and toxic clean-up shall be provided in the SPCCP.	Prior to and During Construction	RD1001 and/or Contractor		
<b>HYDROLOGY AND WATER QUALITY</b>					
<b>HYD-1:</b>	The project shall obtain a NPDES Construction General Permit consistent with Construction General Permit Order No. 2009-009-DWQ issued by the SWRCB. The permit would address grading, clearing, grubbing, and disturbances to the ground such as stockpiling or excavation. The permit would also	Prior to and During Construction	Contractor		



require the project proponent or project contractor to prepare and implement an approved SWPPP with the intent of keeping all products of erosion from moving off-site into receiving waters.				
MITIGATION MEASURES	Reporting Milestone	Reporting / Responsible Party	VERIFICATION OF COMPLIANCE	
			Initials	Date
BIOLOGICAL RESOURCES				
MM-BIO-13: Construction personnel must receive environmental awareness training. Awareness training shall be given by the project biologist(s) who have experience in the natural history of species that may occur within the project area. The training will cover protocol for, identification of, and natural history of the special status species that have the potential to occur within the project area (such as Swainson’s hawk and northern harrier).	During Construction	RD817 and Contractor		
MM-BIO-14: The construction contractor shall avoid removing any vegetation during the nesting bird season (February 1 to August 31). If vegetation must be removed within the nesting season, a pre-construction nesting bird survey must be conducted no more than three (3) days prior to vegetation removal. The vegetation must be removed within three (3) days from the completion of the nesting bird survey.  A minimum 50-foot no-disturbance buffer will be established around any active nest of migratory birds, and a minimum 300-foot no-disturbance buffer will be established around any nesting raptor species. The contractor must immediately stop work in the nesting area until the appropriate buffer is established, and the contractor is prohibited from conducting work that could disturb the birds (as determined by the project biologist and in coordination with RD 817) in the buffer area until a qualified biologist determines the young have fledged. A reduced buffer can be established if determined appropriate by the project biologist and approved by RD 817 and CDFW.	During Construction	RD817 and Contractor		
MM-BIO-15: The removal of large (>6 inches DBH) diameter trees will be avoided to the greatest extent practicable. If feasible, any large diameter trees that cannot be protected within the project impact area shall be removed outside of the Swainson’s hawk nesting season (February 1 – August 31) prior to construction.	During Construction	RD817 and Contractor		

<p><b>MM-BIO-16:</b> If project construction work is scheduled between February 1 – August 31, the project biologist shall conduct a series of focused surveys for Swainson’s hawk nest sites prior to construction. The project biologist shall follow the timing and methodology described in the Swainson’s Hawk Technical Advisory Committee <i>Recommended Timing and Methodology For Swainson’s Hawk Nesting Surveys In California’s Central Valley</i> (2000). The survey shall be conducted in all suitable Swainson’s hawk nesting habitat within a minimum ¼-mile of the project area. Areas that are not accessible without trespassing shall be surveyed from accessible areas using binoculars and spotting scopes. If Swainson’s hawk breeding activity is identified during any of the surveys or during construction, the project biologist shall stop work and consult with CDFW to determine how to proceed. A buffer from work activities or additional appropriate protective measures may be developed in coordination with CDFW.</p>	Prior to Construction	RD817 And Contractor		
<p><b>MM-BIO-17:</b> Permanent impacts to riparian habitat will be mitigated for by the payment of an in-lieu fee or purchase of credits from a regionally-appropriate, agency-approved mitigation bank. Credits for permanent impacts to riparian habitat will be purchased at a 2:1 ratio.</p>	Prior to Construction	RD817		
<b>TRIBAL CULTURAL RESOURCES</b>				
<p><b>MM TCR-1:</b> Cultural Resource Sensitivity Training shall be provided to all personnel working at the project site and shall be provided by both an archaeologist and a Native American representative familiar with the project area. The UAIC have developed a Tribal Cultural Resource brochure which will be provided to all personnel as part of the Cultural Resource Sensitivity Training. The training will include relevant information regarding archaeological and Tribal Cultural Resources, applicable regulations, and protocols for avoidance, as well as consequences for violating State and Federal laws and regulations. The training will also provide archaeological and Tribal Cultural Resources discovery notification and treatment protocol. RD 817 will negotiate a contract with the UAIC to provide these services.</p>	During Construction	RD817 and Contractor		
<p><b>MM TCR-2:</b> A minimum of seven days prior to beginning any ground disturbing activities for the project, Reclamation District 817 will notify the UAIC with the proposed construction schedule. The UAIC will provide a Tribal Monitor or UAIC Tribal Representative to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days of initial ground disturbing activities. RD 817 will negotiate a contract with the UAIC to provide these services.</p>	Prior to and During Construction	RD817		

<p><b>MM TCR-3:</b> If any cultural resources are discovered during construction of the project, all work must be halted within 100 feet of the discovery until a qualified archaeologist can determine the significance of the discovery and implement any protection or mitigation measures. The no work buffer can be augmented or reduced, upon recommendation of the archaeologist. No work can resume until the archaeologist provides authorization.</p>	<p>During Construction</p>	<p>RD817 and Contractor</p>		
<p><b>MM TCR-4:</b> If any Native American cultural resources are discovered during construction of the project, all work must be halted within 100 feet of the discovery and the current Tribal Historic Preservation Officer of the Mooretown Rancheria and the UAIC shall be contacted to determine the significance of the discovery. The Mooretown Rancheria and the UAIC shall provide recommendations on preferred treatment of the discovery. The no work buffer can be augmented or reduced, upon recommendation of the Mooretown Rancheria and UAIC. Work at the discovery location cannot resume until all investigation and significance evaluation of the discovery has been completed under both CEQA and Section 106 of the National Historic Preservation Act.</p>	<p>During Construction</p>	<p>RD817 and Contractor</p>		
<p><b>MM TCR-5:</b> If human remains are encountered, State Health and Safety Code Section 7050.5 dictates that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be indigenous, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. If the MLD is determined not to be the UAIC and the MLD is not responsive in the given time, the UAIC shall be consulted regarding the recommendations or preferences for treatment of the human remains.</p>	<p>During Construction</p>	<p>RD817 and Contractor</p>		