

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

**RECLAMATION DISTRICT 1001 AUXILIARY DRAINAGE PUMP STATION
PROJECT**



Prepared by Dokken Engineering

On behalf of Reclamation District 1001

~~September~~ October 2020

General Information About This Document

What's in this document:

The Reclamation District 1001 has prepared this Initial Study, which examines the potential environmental impacts of the auxiliary drainage pump station being proposed in Sutter 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.

The Draft Initial Study was circulated to the public for comments from September 9, 2020 to October 8, 2020. All written comments received by Reclamation District 1001 have been included in Appendix E. When comments warranted changes to the Initial Study, those changes are shown by underlining added text and ~~striethrough~~ for deleted text.

What you should do:

- ~~• Please read the document. Additional copies of the document and the related technical studies are available for review at: <http://www.rd1001.org/>~~
- ~~• Submit comments by the deadline: October 8, 2020.~~

~~Draft Proposed~~ Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

Reclamation District (RD) 1001 proposes to construct a new auxiliary drainage pump station located along the Natomas Cross Canal (NCC) North Levee at the south end of the RD 1001 Lateral 4 Channel, approximately one mile northeast of the existing RD 1001 Main Drainage Pump Plant within Sutter County, California. The Auxiliary Drainage Pump Station Project (Project) would be cost shared utilizing grant funds through the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP) in coordination with the State of California Office of Emergency Services (CalOES) and RD 1001 funding.

Drainage flows from the agricultural areas within RD 1001 are discharged into the NCC through two existing pump stations. During prior flood events, the risk of damages caused by flooding was increased due to the unreliability of the electrical power causing service outages affecting the existing RD 1001 pump stations. Furthermore, the existing pump stations are not able to be upgraded with backup generators due to the age of the existing facilities. To minimize the flood risk due to loss of power at the existing pump stations, the proposed Project would involve the construction of a fuel-powered pump station that would remain operational during the loss of electrical power, maintaining some pumping capacity of drainage flows.

Determination

This ~~proposed~~ Mitigate Negative Declaration is included to give notice to interested agencies and the public that it is Reclamation District 1001's intent to adopt a Mitigated Negative Declaration for this Project. ~~This does not mean that the Reclamation District'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.~~

Reclamation District 1001 has prepared an Initial Study for this Project and, ~~pending public review, expects to determine from this study that the proposed has determined from this study that the~~ Project would not have a significant effect on the environment for the following reasons.

The Project would have no impact on aesthetics; energy; land use and planning; mineral resources; population and housing; public services; recreation; transportation; and wildfire.

The Project would have a less than significant impact on agriculture and forest resources; geology and soils; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality; noise; and utilities and service systems.

The Project would have less than significant impact with mitigation on air quality; biological resources; cultural resources; and tribal cultural resources.

Thomas Engler, PE
Acting General Manager
Reclamation District 1001
CEQA Lead Agency

Date

Executive Summary

Reclamation District (RD) 1001 proposes to construct a new auxiliary drainage pump station located along the Natomas Cross Canal (NCC) North Levee at the south end of the RD 1001 Lateral 4 Channel, approximately one mile northeast of the existing RD 1001 Main Drainage Pump Plant.

Drainage flows from the agricultural areas within RD 1001 are discharged into the NCC through two existing pump stations. During prior flood events, the risk of damages caused by flooding was increased due to the unreliability of the electrical power causing service outages affecting the existing RD 1001 pump stations. Furthermore, the existing pump stations are not able to be upgraded with backup generators due to the age of the existing facilities. To minimize the flood risk due to loss of power at the existing pump stations, the proposed Project would involve the construction of a fuel-powered pump station that would remain operational during the loss of electrical power, maintaining some pumping capacity of drainage flows.

The Project consists of the following improvements:

- Regrading of the Lateral 4 Channel from the south end of the existing culvert located at the RD 1001 Main Drain Canal to the proposed auxiliary pump station location at the landside toe of the NCC North Levee. This includes lowering the Lateral 4 Channel's bottom, grading the side slopes of the channel, and grading access roads at the top of the channel, where required, to maintain a minimum width of 12 feet.
- Raising and widening of the NCC North Levee to accommodate the new pump station discharge pipes and associated appurtenances including propane tanks, and to maintain levee crown access around the proposed facilities. Two landside ramps and one waterside ramp would also be constructed to provide access to the proposed pump station and a proposed outfall structure from the levee crown.
- Construction of the pump station at the south end of the Lateral 4 Channel at the landside toe of the NCC North Levee. The pump station would consist of a steel frame structure with a concrete mattress foundation, two vertical turbine pumps, two propane power units, and associated appurtenances. A walkway would be constructed from the levee crown to the proposed pump station for maintenance access. Propane tanks would be located on the levee crown with fuel lines running from the propane tanks to the power units.
- Construction of two 36-inch drainage discharge pipes. The discharge pipes would begin at the proposed pump station, cross the NCC North Levee within the levee embankment, and end at a proposed concrete outfall structure located at the waterside toe of the levee. The discharge pipes would include appurtenances located at the pump station and at the crown of the levee. The appurtenances at the crown of the levee would be contained within a concrete vault structure. The discharge pipes would be supported on pipe support structures from the pump station to a location where the pipes enter the levee embankment.
- Construction of a railcar bridge that would span the Lateral 4 Channel at a location just upstream of the proposed pump station. The proposed bridge would include a trash rack at its upstream end. An existing drainpipe would be relocated to accommodate the railcar bridge and trash rack.

- Grading of two irrigation ditches to convey flows from the existing ditches west and east of the Project site. The ditches would outfall to the Lateral 4 Channel at a location upstream of the proposed railcar bridge and trash rack. The proposed ditch alignments would encroach onto the surrounding fields and would include 12-foot access roads. The remainder of the existing ditch located in between the proposed irrigation ditches and the pump station would be filled.

The Project would require partial acquisition of private property adjacent to the Lateral 4 Channel. No utilities are required to be relocated as part of this Project. Construction access would be along the crown of the NCC North Levee, with access provided to the levee crown either from the Garden Highway or from East Striplin Frontage Road. Construction staging would be located at the landside toe of the NCC North Levee within the proposed construction limits.

The measures to reduce potential effects to insignificance are summarized below.

Table i: Summary of Potential Impacts

Resource	Project Impacts	Summary of Avoidance, Minimization, and/or Mitigation Measures
Aesthetics	No Impact	N/A
Agriculture and Forest Resources	Less than Significant Impact	N/A
Air Quality	Less than Significant Impact	Dust control during construction.
Biological Resources	Less than Significant Impact with Mitigation	ESA and wildlife exclusion fencing; Swainson's hawk protocol level surveys; BMP implementation to reduce erosion; post-construction restoration; rare plant survey; environmental awareness trainings.
Cultural Resources	Less than Significant Impact with Mitigation Incorporated	Compliance with regulations relating to unexpected discovery of cultural resources or human remains.
Energy	No Impact	N/A
Geology and Soils	Less than Significant Impact	N/A
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 Program.
Hydrology and Water Quality	Less than Significant Impact	Maintenance and staging of equipment a minimum of 100 feet from flowing water associated with the NCC; standard BMPs to minimize water quality impacts.
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

Resource	Project Impacts	Summary of Avoidance, Minimization, and/or Mitigation Measures
Tribal Cultural Resources	Less than Significant Impact with Mitigation Incorporated	Compliance with regulations relating to unexpected discovery of cultural resources or human remains.
Utilities and Service Systems	Less than Significant Impact	The Project will improve drainage infrastructure.
Wildfire	No Impact	N/A
Mandatory Findings of Significance	No Impact	N/A

The detailed CEQA checklist with discussion and findings of Project impacts on each resource is in Section 2 of this Initial Study.

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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
CNDDDB	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
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
WEF	Wildlife Exclusion Fencing

1.0 Project Description

1.1 Introduction

Reclamation District (RD) 1001 proposes to construct a new auxiliary drainage pump station located along the Natomas Cross Canal (NCC) North Levee at the south end of the RD 1001 Lateral 4 Channel, approximately one mile northeast of the existing RD 1001 Main Drainage Pump Plant within Sutter County, California. The Auxiliary Drainage Pump Station Project (Project) would be cost shared utilizing grant funds through the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP) in coordination with the State of California Office of Emergency Services (CalOES) and RD 1001 funding.

Drainage flows from the agricultural areas within RD 1001 are discharged into the NCC through two existing pump stations. During prior flood events, the risk of damages caused by flooding was increased due to the unreliability of the electrical power causing service outages affecting the existing RD 1001 pump stations. Furthermore, the existing pump stations are not able to be upgraded with backup generators due to the age of the existing facilities. To minimize the flood risk due to loss of power at the existing pump stations, the proposed Project would involve the construction of a fuel-powered pump station that would remain operational during the loss of electrical power, maintaining some pumping capacity of drainage flows.

1.2 Purpose

The purpose of the Project is to reduce flood risk and the damages caused by flooding due to the unreliability of electrical power to the existing pump station.

1.3 Need

The existing pump station is not able to be upgraded with backup generators, which necessitates a new propane-powered pump station that will maintain a baseline pumping capacity during flood events.

1.4 Alternatives

The Reclamation District 1001 Auxiliary Drainage Pump Station Project includes a build alternative and a no-build alternative.

1.4.1 Build Alternative

The Build Alternative would consist of the following improvements:

- Regrading of the Lateral 4 Channel from the south end of the existing culvert located at the RD 1001 Main Drain Canal to the proposed auxiliary pump station location at the landside toe of the NCC North Levee. This includes lowering the Lateral 4 Channel's bottom, grading the side slopes of the channel, and grading access roads at the top of the channel, where required, to maintain a minimum width of 12 feet.
- Raising and widening of the NCC North Levee to accommodate the new pump station discharge pipes and associated appurtenances including propane tanks, and to maintain levee crown access around the proposed facilities. Two landside ramps and one waterside ramp would also be constructed to provide access to the proposed pump station and a proposed outfall structure from the levee crown.

- Construction of the pump station at the south end of the Lateral 4 Channel at the landside toe of the NCC North Levee. The pump station would consist of a steel frame structure with a concrete mattress foundation, two vertical turbine pumps, two propane power units, and associated appurtenances. A walkway would be constructed from the levee crown to the proposed pump station for maintenance access. Propane tanks would be located on the levee crown with fuel lines running from the propane tanks to the power units.
- Construction of two 36-inch drainage discharge pipes. The discharge pipes would begin at the proposed pump station, cross the NCC North Levee within the levee embankment, and end at a proposed concrete outfall structure located at the waterside toe of the levee. The discharge pipes would include appurtenances located at the pump station and at the crown of the levee. The appurtenances at the crown of the levee would be contained within a concrete vault structure. The discharge pipes would be supported on pipe support structures from the pump station to a location where the pipes enter the levee embankment.
- Construction of a railcar bridge that would span the Lateral 4 Channel at a location just upstream of the proposed pump station. The proposed bridge would include a trash rack at its upstream end. An existing drainpipe would be relocated to accommodate the railcar bridge and trash rack.
- Grading of two irrigation ditches to convey flows from the existing ditches west and east of the Project site. The ditches would outfall to the Lateral 4 Channel at a location upstream of the proposed railcar bridge and trash rack. The proposed ditch alignments would encroach onto the surrounding fields and would include 12-foot access roads. The remainder of the existing ditch located in between the proposed irrigation ditches and the pump station would be filled.

The Project would require partial acquisition of private property adjacent to the Lateral 4 Channel. No utilities are required to be relocated as part of this Project. Construction access would be along the crown of the NCC North Levee, with access provided to the levee crown either from the Garden Highway or from East Striplin Frontage Road. Construction staging would be located at the landside toe of the NCC North Levee within the proposed construction limits.

1.4.2 No-Build Alternative

The No-Build Alternative would not construct a new pump station, railcar bridge, drainage discharge pipes, or other proposed facilities. This alternative would not raise or widen the NCC North Levee and would not regrade the Lateral 4 Channel nor grade two irrigation ditches. The no-build alternative would leave the two electrically powered pump stations as is, which would maintain the current risks of flood and damages caused by flooding during a power outage.

Figure 1: Project Vicinity

Figure 2: Project Location

Figure 3: Project Features

1.5 Permits and Approvals Needed

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

Table 1: Permit and Approvals Needed

Agency	Permit/Approval	Status
California Department of Fish & Wildlife (CDFW)	Section 1600 Streambed Alteration Agreement	To be obtained during Final Design
California Department of Fish & Wildlife (CDFW)	2080.1 Concurrence Letter for impacts to Giant Garter Snake	To be obtained concurrent with Section 7 Consultation with USFWS <u>and FEMA</u>
Regional Water Quality Control Board	Section 401 Water Quality Certification	To be obtained during Final Design
U.S. Army Corps of Engineers	Section 404 Nationwide Permit Authorization	To be obtained during Final Design
<u>Federal Emergency Management Agency</u>	<u>National Environmental Policy Act Determination</u>	<u>To be obtained during Final Design</u>
U.S. Army Corps of Engineers	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 Incorporated, 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) *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) *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) *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) *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
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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 Dept. 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 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input 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 designation of the auxiliary drainage pump station site is Agricultural (Prime Farmland) or, more specifically, AG-80 Agriculture (80-acre minimum parcel size). This designation is applied in locations that have minimal intrusion and conflict from non-agricultural uses... typical permitted uses include crop production, orchards, grazing, pasture and rangeland, and associated residences and agricultural support uses (*Sutter County General Plan, 2011*).

DISCUSSION

- a) *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?*

Less than Significant Impact. The Project would require acquisition of private agricultural property to accommodate the realigned canal and construction of the pump station; however, these facilities would be improvements to the existing farming irrigation system and would continue to be used for an agricultural land use. As a result, no conversion of farmland use is anticipated as a result of the proposed project. The project area would continue to be zoned as AG-80 Agriculture in the Sutter County General Plan.

- b) *Conflict with existing zoning for agricultural use, or a Williamson Act contract?*

No Impact. Based on a review of the Sutter County General Plan (Section 6.3 Agricultural Resources, Figure 6.3-2) there are no Williamson Act contract lands within the Project area.

- 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))?*

No Impact. There are no forests or forest resources located within the Project area; therefore, the Project would have no impacts with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.

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

No Impact. There are no forests 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 on forest land.

- e) *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 is consistent with state and local farmland protection programs and policies. Furthermore, the Project would have no conversion of farmland or agriculture use in the Project area. No other changes in the existing environment which could result in the conversion of Farmland are anticipated.

FINDINGS

The affected land is not under a Williamson Act contract. A partial parcel acquisition would be necessary to complete the Project, which would meet the purpose and need of the Project and be beneficial to the surrounding land. The project would result in **Less than Significant Impacts** 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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

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 (NO₂), ozone (O₃), particulate matter (PM), lead (Pb), and sulfur dioxide (SO₂).

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 SIP. In California, the 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 Sutter 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) *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) *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 California Air Resources Board (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 Sutter County is shown on **Table 2**.

Table 2: NAAQS and CAAQS Attainment Status for Sutter County

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – 8-Hour	Non-attainment	Attainment
PM ₁₀	Attainment	Non-attainment
PM _{2.5}	Attainment/Unclassified	Attainment
Carbon Monoxide	Attainment/Unclassified	Attainment
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Sulfates	No Federal Standard	Attainment
Lead	Attainment/Unclassified	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility Reducing Particles	No Federal Standard	Unclassified

Sources: California Air Resources Board 2018

Operational Emissions

Operation of the fuel power units is expected to only occur when flood/irrigation waters are high and when a power outage at the main pump station occurs. For these reasons, usage of the fuel power units at the auxiliary pump station is expected to be extremely infrequent. Propane gas when burned releases carbon dioxide, and small amounts of nitrous oxide and methane; however, the annual usage of this facility is not expected to result in any air quality emissions approaching local, regional, or state thresholds. For these reasons, operational impacts are considered to be less than significant.

Construction Emissions

Construction activities associated with the auxiliary pump station result in some temporary incremental increases in air pollutants, such as ozone precursors and particulate matter due to operation of gas powered equipment and earth moving activities. However, the proposed construction activities would be temporary in nature and are not anticipated to generate large amounts of dust or particulates with incorporate of standard air quality best management practices. The Project would be implementing best available control measures, as required by **AQ-1**, to reduce dust and particulate spreading.

All construction activities would follow the FRAQMD rules and would implement all appropriate air quality BMPs, including minimizing equipment idling time and use of water or similar chemical palliative to control fugitive dust. The implementation of **AQ-1** would also be used to minimize effects of impacts on air quality due to construction. These measures provide compliance guidelines for

minimizing fugitive dust to protect sensitive receptors in the vicinity. With adherence to **AQ-1** construction emissions would result in a **Less Than Significant Impact**.

c) *Expose sensitive receptors to substantial pollutant concentrations?*

No Impact. The proposed project would not generate any substantial pollutant concentrations, nor are there any sensitive receptors nearby to the project area.

d) *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) generated by construction activities would occur; however, they would not adversely any sensitive receptors due to none being present in or adjacent to the project area.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

AQ-1: Prior to the start of construction, a Fugitive Dust Control Plan issued by the Feather River AQMD shall be obtained.

FINDINGS

Long-term air quality impacts are not anticipated as a result of the new auxiliary drainage pump station. The Project would comply with all federal, state, and FRAQMD standards. Short term emissions from construction would result in a **Less than Significant Impact with Mitigation Incorporated**.

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 checked="" type="checkbox"/>	<input 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 Services (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 U.S. CWA serves as the primary Federal law protecting the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. CWA empowers the U.S. Environmental Protection Agency (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. 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 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 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., 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.

State Regulations

California Environmental Quality Act

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. 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).

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 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)].

Section 1602: Streambed Alteration Agreement

Under CFG Code 1602, public agencies are required to notify CDFW before undertaking any project that will 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 may 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 rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

AFFECTED ENVIRONMENT

The Project is within an unincorporated area of Sutter County in the California Dry Steppe Province ecological subregion, Great Valley Section, and ecological subsection 262Ag (Hardpan Terraces) of California (USDA 2007). The region receives an average of 18 inches of precipitation annually in the form of rain.

The Biological Study Area (BSA) encompasses approximately 17.7 acres and includes approximately 5,900 linear feet of RD 1001 Lateral 4 Channel. The BSA is approximately 1.1 miles long and follows the alignment of the RD 1001 Lateral 4 Channel. Habitats within the BSA have been highly disturbed by agricultural activities, invasive species, and regular human disturbance.

Physical Conditions**Topography**

The BSA is within the USGS Verona 7 ½ Minute Quadrangle. The Project area occurs within a single distinct topographic region of valley floor, and the natural elevation within the Project area is ranges from 13-18 feet above mean sea level. The topography of the valley floor consists of low-elevation fluvial plains formed on nonmarine sedimentary rock with gently rolling terrain located on the Sacramento valley floor. Topography in the surrounding area includes the NCC, the Sacramento River, and the Feather River.

Soils

The Natural Resource Conservation Service (NRCS) Custom Soil Resource Report for the Project (NRCS 2020) identifies soils within the BSA as:

- Capay silty clay, 0 to 2 percent slopes (96.2%)
- Water (3.8%)

Hydrological Resources

The BSA includes two surface water features: RD 1001 Lateral 4 Channel, and the NCC. The Lateral 4 Channel provides water resources to the adjacent farmlands which are flood-irrigated rice fields. The NCC provides flood protection to the Natomas Basin and flows east to west for approximately 5 miles connecting to the Sacramento River at Joe's Landing. The entire Project area is within FEMA Zone A, designated as a Special Flood Hazard Area subject to inundation by the 1% annual chance of flood.

Biological Conditions

The BSA is dominated by non-native annual grassland areas and aquatic habitats. Land use within the BSA is designated as "Agriculture – 80 acre" and "Open Space". Dominant land cover

and vegetative communities within the BSA consist of urban/barren, disturbed/ruderal, annual grassland, rice field, riparian, and perennial drainage canal.

Vegetation Communities

Urban / Barren

Urban/Barren habitat are man-made infrastructures and are defined by the absence of any vegetation. Urban habitat within the Project area consist of the constructed gravel road at the top of the NCC levee.

Disturbed / Ruderal

The disturbed/ruderal land cover type is defined as areas that have been subject to previous or ongoing disturbances such as along roadsides, trails, and parking lots. This vegetation communities consists of the vegetated farm roads that are used for farm access and are mowed, scraped, graded and sprayed with herbicides to reduce vegetation growth. The disturbed/ruderal land cover type is vegetated with diverse weedy flora including: milk thistle (*Silybin marianum*), yellow-star thistle (*Centaurea solstitialis*), field bindweed (*Convolvulus arvensis*), sow thistle (*Sonchus asper ssp. asper*), perennial ryegrass (*Festuca perennis*), black medick (*Medicago lupulina*), common chicory (*Cicorium intybus*) and cheeseweed (*Malva parviflora*).

Annual Grassland

A large portion of the Project area is dominated by annual grassland areas. The annual grasslands cover the embankments of the NCC levee, as well as areas between the toe of the levee and farmlands. Species composition within the annual grassland habitat consist of non-native grasses and forbs including, species including wild oat (*Avena sp.*), perennial ryegrass, riggut brome (*Bromus diandrus*), stork's bill (*Erodium cicutarium*), winter vetch (*Vicia villosa*), prickly lettuce (*Lactuca serriola*), and others.

Rice Field

The BSA includes two areas of rice field on the east and west side of the RD 1001 Lateral 4 Channel. This habitat is an intensively farmed area, but during the growing season is flood-irrigated for rice production. This habitat can provide suitable aquatic habitat for a number of species including GGS.

Riparian

A thin band of riparian habitat occurs within the BSA above the OHWM of the NCC at the toe of the levee. Within the riparian corridor, vegetation species accustomed to fluctuating wet conditions are present including: rough cocklebur (*Xanthium strumarium*), curly dock (*Rumex crispus*), fennel (*Foeniculum vulgare*), and Gooding's black willow (*Salix gooddingii*).

Perennial Irrigation Canals

A majority of the BSA is dominated by the RD 1001 Lateral 4 Channel. Additionally, a small portion of the NCC was delineated within the BSA. The perennial irrigation canal habitat is defined as the average wetted area within the perennial linear water features such as rivers, streams and creeks. Most of the perennial irrigation canal habitat occurs as inundated water below the OHWM. Species within this habitat type include water smartweed (*Persicaria amphibia*), cattails (*Typha sp.*), tall flatsedge (*Cyperus eragrostis*), watercress (*Nasturtium officinale*), and sandbar willow (*Salix exigua*).

DISCUSSION

- 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 Wildlife, U.S. Fish and Wildlife Service, or NOAA Fisheries?*

Less Than Significant Impact with Mitigation Incorporated. The area is potentially suitable for Swainson's hawk, giant garter snake (GGS), and western pond turtle. Each of these species is described in greater detail in the sections below.

Special Status Wildlife Species

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

The BSA does contain potentially suitable large nesting trees within and directly adjacent to the BSA. Additionally, the BSA does contain potentially suitable foraging habitat and open agricultural lands for potential foraging are adjacent to the BSA. During the biological surveys, large diameter potential nesting trees within the BSA were surveyed for existing raptor nest structures. No nesting structures were identified. A recent (2004) California Natural Diversity Database (CNDDDB) occurrence of nesting Swainson's hawk is located directly adjacent to the BSA. The species is considered to have a high potential of occurring within the BSA, or within ¼ mile of the BSA, based on presence of potentially suitable habitat and recent local occurrences.

Project Effects to Swainson's Hawk

Project impacts to Swainson's hawk would include removal of approximately 0.09 acres of annual grassland potential Swainson's hawk foraging habitat. Additionally, according to the CNDDDB occurrences, nesting sites have been known to occur within ¼ mile of the Project area; however, no current or historic nesting locations are known to occur within the Project Area. Therefore, the Project does not anticipate direct impacts to Swainson's hawk nesting sites or known Swainson's hawk nesting trees. To ensure no Swainson's hawk nesting sites are directly impacted by vegetation removal necessary for construction of the Project, measure **BIO-6** below would be incorporated into the Project design.

Project construction would require large equipment and the presence of the human form, which may have the potential to disturb any nesting Swainson's hawk within the vicinity of the Project. To prevent disturbance of any nesting Swainson's hawk, measure **BIO-7** below would provide species specific pre-construction nesting surveys consistent with survey methods recommended by the *Swainson's Hawk Technical Advisory Committee* within ¼ mile of the Project. Therefore, no disturbance to nesting Swainson's hawk are anticipated. With the implementation of Project

avoidance and minimization measures, use of Standard BMPs, the Project would not result in take of Swainson's hawk. With the avoidance of take, the Project does not anticipate that a CDFW Section 2081 Incidental Take Permit (ITP) for Swainson's hawk would be necessary.

Giant Garter Snake

GGs is a federally listed threatened species. GGS is one of the largest garter snakes and is endemic to the wetlands within the Sacramento and San Joaquin valleys. GGS inhabits marshes, sloughs, ponds, small lakes, low gradient streams, and other waterways and agricultural wetlands, such as irrigation and drainage canals and rice fields, and the adjacent uplands (USFWS 2017). GGS feed on small aquatic animals such as fish, tadpoles, and frogs. Essential habitat components for GGS consist of: Wetlands with adequate water during the snake's active season (early-spring through mid-fall) to provide food and cover; emergent herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat during the active season; upland habitat with grassy banks and openings in waterside vegetation for basking; and higher elevation uplands for escape cover (vegetation, burrows) and underground refugia (crevices and small mammal burrows) (Hanson 1980).

The GGS breeding season extends through March and April, and females give birth to live young from late July through early September (Hansen and Hansen 1990). At birth, young disperse into dense cover and typically double in size by one year of age, while sexual maturity average three years in males and five years for females. According to studies of marked snakes in the Natomas Basin, snakes moved about 0.25-0.5 miles per day (Hansen and Brode 1993). GGS typically inhabit small mammal burrows for winter dormancy, escape and cover, and also as refuge from extreme heat during their active period. Burrows are typically close to wetland or water sources; however, GGS have been documented using burrows as far as 820 feet from the edge of marsh habitat.

Giant Garter Snake Survey Results

Rice fields, irrigation channels, cattails, grassy banks and open watersides areas are present within the BSA. Additionally, the BSA provides adjacent uplands, varied topography and mammal estivation sites. The Project area contains approximately 7.47 acres of aquatic habitat and approximately 11.07 acres of upland dispersal habitat. The nearest CNDDDB occurrence of the species is located within the BSA, in the RD 1001 Lateral 4 Channel and NCC. The Natomas Basic Conservancy conducted 2016 surveys within and surrounding the conservation easement on the opposite side of NCC and found a high number of GGS specimen throughout the area. The species was not observed within the BSA during field surveys, but is considered to have a high potential of occurring within the BSA based on presence of suitable habitat and confirmed use of the Project area. According to USFWS (USFWS 2017), no designated Critical Habitat has been published for GGS.

Project Effects to Giant Garter Snake

Stressors from Project Actions

Stressors induce an adverse response in an organism by any physical, chemical, or biological alteration of the environment (or resource) that can lead to a response from the individual. Stressors can act directly on an individual, or indirectly through effects to a resource. Potential stressors resulting from construction of the Project may include:

- Construction activities

- Removal of aquatic habitat
- Removal of upland habitat
- Temporary increases in turbidity
- Temporary increases in vibration
- Temporary increases in noise

Exposure to Stressor from the Action

Exposures are defined as the interaction of the species, their resources, and the stressors that result from the Project action. GGS essential behavior patterns such as breeding, feeding, and sheltering are likely to be exposed to the stressor listed above. These stressors may have direct or indirect interactions with GGS and are discussed below.

- Construction activities – Construction activities within the Action Area would expose GGS to a potential direct interaction with construction equipment. Because GGS use small burrows and soil crevices for shelter, snakes could be crushed, buried, or otherwise injured during construction activities.
- Removal of aquatic habitat – The removal of aquatic habitat within the Action Area would expose GGS to an indirect interaction with the aquatic resources the species uses for its essential behavior patterns of feeding and movement. The removal of aquatic habitat within the Action Area would result in changes to the quantity of suitable habitat for GGS.
- Removal of upland habitat – The removal of upland habitat would include vegetation removal, grading, excavation and other activities necessary to complete the bridge replacements and new roadway alignment. The removal of upland habitat would expose GGS to an indirect interaction with the upland resources the species uses for its essential behavior patterns of cover and dispersal. The Action Area did not show signs of suitable estivation habitat or mammal burrows. The removal of upland habitat within the Action Area would result in changes to the surrounding quantity of suitable cover and dispersal habitat for GGS.
- Increases in vibration / Increases in noise – Increases in vibration and noise during construction may affect GGS. Vibrations and noise produced by construction activities may cause snakes to avoid areas adjacent to the Project Area and as a result may temporarily decrease available habitat beyond the Project Area.

Response to the Exposure

GGS responses to the exposure of stressors discussed in section 5.2. have been moderately well documented. Ongoing construction and maintenance of aquatic habitats for flood control and agricultural purposes eliminate or prevent the establishment of essential habitat characteristics necessary for GGS and can fragment and isolate available habitat, prevent dispersal, and adversely affect the availability of the snake's food items (Hansen 1988; Brode and Hansen 1992). Habitat loss as a result of urbanization and conversion of wetlands was recognized as the primary threat to GGS (USFWS 2015). As habitat has been degraded or lost, the species has declined in population and has become extirpated from the southern expanse of its historic range.

GGs response to increased turbidity has not been fully documented. However, declining water quality is expected to adversely affect GGS and contribute to the loss of habitat due to low water quality. Declining water quality may also lead to a declining availability of prey for GGS leading to further habitat fragmentation and separation of GGS populations.

GGs response to noise and vibration is not well documented. The Project would involve pile driving and would generate vibration and loud volumes during site grading and demolition of the existing bridges. Construction activity, vibration and noise may harass GGS or prompt them to move into unfamiliar or marginal habitat that is less suitable for foraging, breeding, hibernation, or shelter from predation (USFWS 2005).

Effects of the Action

Effect is a description of the manner in which the action may affect any listed species or critical habitat and an analysis of any cumulative effect (50 CFR 402.02). The effect of the action is the consequence (behavioral, physical, or physiological) of a response to a stressor.

The Project is anticipated to result in less than 20 acres of temporary disturbance to GGS habitat and would not exceed permanent losses of 3 acres of GGS habitat within 1 year of construction activity. Due to these factors, it was determined that the Project qualifies for Level 1 and Level 3 effects in accordance with the 1997 USFWS *Programmatic Formal Consultation for U.S. Army Corps of Engineers 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake within Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter and Yolo Counties, California* (Programmatic BO) (1-1-F-97-149). Potential construction-related direct effects to GGS include Project effects to GGS habitat and the risks associated with accidental spills of hazardous chemicals and materials to waters.

Direct Effects

The proposed Project is anticipated to result in direct temporary and permanent effects to GGS habitat. However, direct effects of the Project would be reduced by providing USFWS-approved worker environmental awareness training, implementation of avoidance and minimization measures, and conducting a clearance surveys prior to construction within GGS habitat areas. In spite of these proposed efforts to minimize impacts to GGS, there is a potential for incidental take due to the high number of occurrences within the project vicinity. Minimization measures should greatly reduce the potential for mortality should any specimen be present during construction.

The Project would result in direct temporary effects to GGS due to disturbance of approximately 9.12 acres of upland habitat, and 4.10 acres of aquatic habitat (3.83 acres of irrigation canal and 0.27 acres of rice habitat) (Table 3. Project Effects to GGS Habitat; Figure 4. Project Effects to GGS Habitat). Temporary effects to upland habitat would include vegetation clearing, regrading, staging, access, and other construction activities. These activities are likely to remove vegetative cover and potential basking sites necessary for thermoregulation within the grassland and disturbed/ruderal areas. However, these habitats would be temporarily affected and would be revegetated with native species as part of Project restoration requirements. Temporary effects to aquatic habitat would include access of construction equipment within RD 1001 Lateral 4 and NCC for regrading of the canal and construction of the new pump station.

The Project would result in direct permanent effects to GGS due to the loss of approximately 0.14 18 acres of upland habitat, and 0.57-76 acres of aquatic habitat (0.27 acres of irrigation canal and

0.30-49 acres of rice habitat). However, the Project would also consist of two new drainage canal connection channels that would provide an aquatic benefit of approximately 0.24 acres; therefore, direct permanent effects to aquatic habitat would calculate to 0.33-52 acres (0.57-76 acres – 0.24 acres = 0.33-52 acres). Direct permanent effects to aquatic habitat would include the placement of fill materials within existing sections of RD 1001 Lateral 4 Channel, and the construction new pump station. Permanent effects to upland habitat would include removal of grassland and disturbed/ruderal dispersal habitat.

Table 3. Project Effects to GGS Habitat

GGS Habitat Type	Project Effects (acres)
Temporary Effects	
Upland	9.12
Rice	0.27
Aquatic	3.83
Total	13.22
Permanent Effects	
Upland	0.1418
Rice	0.3049
Aquatic	0.27 – 0.24 = 0.03
Total	0.4770

In addition to the Project's direct effects to GGS habitat, Project related activities could potentially impair water quality should hazardous chemicals (e.g. fuels and petroleum-based lubricants) or other materials enter the Lateral 4 Channel or the NCC. Project-related chemical spills could potentially affect GGS by causing physiological stress and causing direct mortality. However, implementation of avoidance and minimization measures described in Section 4.1.1.3 would minimize and avoid potential for exposure to hazardous chemicals; no take of GGS is expected due to hazardous chemicals.

Indirect Effects

Potential indirect effects to GGS include a temporary increase in noise, human presence, ground vibrations, and the potential temporary sedimentation and the Lateral 4 Channel or the NCC within the Project area. Establishment of ESA fencing would separate construction activities from the live channels and would minimize sediments from entering the Lateral 4 Channel or the NCC. BMPs incorporated into the Project plans would further minimize turbidity effects. These effects would be temporary and limited to the duration of construction activities.

Figure 4: Project Effects to Giant Garter Snake

Compensatory Mitigation for Giant Garter Snake

As part of the environmental review process for the Project, the USACE has designated the Federal Emergency Management Agency (FEMA) as the lead federal agency to act on behalf of USACE and, in turn, will consult with USFWS under Section 7 of the FESA. Under the USFWS 1997 Programmatic BO, the Project would follow compensatory guidelines as indicated for Level 1 and Level 3 Project effects for temporary and permanent direct effects of the through 1 working season. Coordination with FEMA and CDFW will also occur to ensure the final federal incidental take statement or permit meets CESA criteria in order to obtain a CESA Consistency Determination (CD) from CDFW.

The Project would provide compensatory mitigation for temporary impacts to GGS habitat at Level 1 with on-site restoration of temporary effects to GGS habitat at a 1:1 ratio and one year of monitoring. Additionally, all permanent loss of GGS aquatic and upland habitat would be compensated at a ratio of 3:1 and the permanent loss of rice habitat shall be compensated at a 1:1 ratio. Table 4 below provides a detailed analysis of the compensatory mitigation analysis. With incorporation of BIO-18, the Project would mitigate potential impacts to GGS and its habitat to a less than significant level.

Table 4. Compensatory mitigation for GGS Habitat

GGH Habitat Type	Project Effects (acres)	Level 1 Compensatory Mitigation Ratio	Level 3 Compensatory Mitigation Ratio	Total Compensatory Mitigation (acres)
Level 1 Temporary Effects				
Upland	9.12	<u>4:1 Restoration and one year of monitoring</u>		<u>9.12 N/A</u>
Rice	0.27	<u>Restoration and one year of monitoring 4:1</u>		<u>0.13 N/A</u>
Aquatic	3.83	<u>Restoration and one year of monitoring 4:1</u>		<u>3.83 N/A</u>
Total	13.22			<u>13.22 N/A</u>
Level 3 Permanent Effects				
Upland	<u>0.4418</u>		3:1	<u>0.4254</u>
Rice	<u>0.3049</u>		<u>43:1</u>	<u>0.30147</u>
Aquatic	$0.27 - 0.24 = 0.03$		3:1	0.09
Total	<u>0.4770</u>			<u>0.81210</u>

Western Pond Turtle

The western pond turtle (WPT) is not a State or Federally listed species but is a CDFW Species of Special Concern. WPTs are native to the west coast and are found from Baja California, Mexico north through Klickitat County, Washington. The WPT is a fully aquatic turtle, inhabiting ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. The species requires suitable basking sites such as logs, rocks and exposed banks and associated upland habitat consisting of sandy banks or grassy open fields for reproduction. The species is omnivorous, consuming aquatic wildlife and vegetation. The WPT is known to hibernate underwater beneath a muddy bottom in colder climates and reproduce from March to August (Zeiner 1990). Nests are generally found in flat areas with low vegetation and dry, hard soil.

Western Pond Turtle Survey Results

Irrigation ditches with aquatic vegetation and suitable basking sites are present within the BSA. The WPT was not observed during 2020 field surveys. The nearest CNDDDB occurrence of the species is located approximately 5 miles from the BSA. The species is considered to have a low to moderate potential of occurring within the BSA based on presence of potentially suitable habitat and the proximity of recent regional occurrences to the BSA.

Project Effects to Western Pond Turtle

The proposed Project would construct a new auxiliary drainage pump station located along the NCC north levee at the south end of the RD 1001 Lateral 4 channel. The Project is anticipated to permanently impact approximately 0.03 acres of aquatic habitat and approximately 0.14 acres of upland habitat. Additionally, the Project is anticipated to have temporary impacts to approximately 3.83 acres of aquatic habitat, and approximately 9.12 acres of upland habitat. With the implementation of the species-specific avoidance and minimization measures identified below, no direct impacts to WPT are anticipated.

Mitigation measures **BIO-19** through **BIO-21** would be incorporated into the Project design and implemented.

Migratory Birds

Native birds, protected under the Migratory Bird Treaty Act (MBTA) and similar provisions under CFG Code, have the potential to nest within the Project area.

Mitigation measure **BIO-22** would be included into the Project design and implemented.

Special Status Plant Species

Woolly Rose-Mallow

Woolly rose-mallow (*Hibiscus lasiocarpus* var. *occidentalis*) is not a state or federal listed species, but is a CNPS rare plant rank 1B.2. Woolly rose-mallow is a perennial rhizomatous herb inhabiting freshwater wetlands, wet banks, and marsh communities, and is often found in-between riprap on levees. The species flowers from June-September at elevations ranging from 0-394 feet.

Woolly Rose-Mallow Survey Results

No woolly rose-mallow was observed during the March 23, 2020 biological surveys. The BSA does contain potentially suitable wet banks within the Lateral 4 Channel and NCC. The nearest CNDDDB occurrence of the species is located approximately 5 miles northeast of the BSA within NCC recorded in 2015. The species is considered to have a low potential of occurring within the BSA based on presence of potentially suitable habitat, and the moderate number of regional occurrences.

Mitigation measure **BIO-5** would be implemented to address special status plant species.

- 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 Wildlife or U.S. Fish and Wildlife Service?*

Less Than Significant with Mitigation Incorporated. The Project would result in both permanent and temporary effects to California Department of Fish and Wildlife (CDFW) jurisdictional habitats. Effects include dredging of the RD 1001 Lateral 4 Channel and construction

access areas that would be recontoured and revegetated with a native seed mix after construction. Below is further discussion regarding habitat and specific species and mitigation measures to reduce impacts to less than significant.

Riparian Habitat

Riparian habitat associated with the NCC was delineated above the NCC ordinary high water mark at the toe of the levee slope. During delineation efforts, this area was sampled for wetland indicators, and an Arid West Wetland Delineation Datasheet was completed. Results of the sampling and datasheet determined the area not to be a wetland, due to the lack of hydrophytic vegetation. Therefore, the area is considered a non-wetland riparian habitat. As riparian habitat associated with a Waters of the State, the riparian zone would also be considered a jurisdictional Waters of the State (see response to question c) below). Approximately 0.87 acres of riparian habitat were delineated within the Project area.

- 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?*

Less than Significant with Mitigation Incorporated. The RD 1001 Lateral 4 Channel and the NCC provided primary indicators for Ordinary High Water Mark determined by completion of the U.S. Army Corps of Engineers Arid West OHWM Datasheet and do exhibit connectivity to other Waters of the U.S. (WoUS).

The Project would result in both permanent and temporary effects to jurisdictional WoUS and Waters of the State. Permanent effects include areas that would be altered by required fill materials for construction of the pump station and associated pump station features. Temporary effects include dredging of the RD 1001 Lateral 4 Channel and construction access areas that would be recontoured and revegetated with a native seed mix after construction.

Disturbance, excavation, and filling activities would occur during construction and impacts from such would be minimized by the measures below.

Jurisdictional Waters

Potential jurisdictional waters within the BSA were assessed and potential wetland features were evaluated for presence of the following wetland indicators: hydrophytic vegetation, hydric soils and wetland hydrology. Surveys of potential jurisdictional waters were confirmed using aerial imagery and field verification, and followed the guidelines provided in the USACE Wetland Delineation Manual (USACE 1987), Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a), and A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States (USACE 2008b). Wetlands that exhibit all three wetland indicators are considered WoUS if they are hydraulically connected to another WoUS. All WoUS are also considered Waters of the State by the RWQCB under Section 401 of the CWA. These Waters of the State and additional wetland and riparian areas associated with Waters of the State can also be considered under jurisdiction of the CDFW under California FGC Section 1600.

Jurisdictional Waters Survey Results

Results of the sampling and datasheet determined the area not to be a wetland, due to the lack of hydrophytic vegetation. Therefore, the area is considered a non-wetland riparian habitat.

Figure 5: Vegetation Communities

Flood Irrigated Rice Fields

Rice fields are a prominent feature within the BSA. Although these fields are flooded for a significant portion of the year and may meet all three wetland indicators, pursuant to Part 230.3 subsection (o)(2)(iv)(B) of the Clean Water Act, fields flooded for rice growing in otherwise dry land are not waters of the United States even if they otherwise meet the conditions to be waters of the United States (40 CFR 230.3). Historic aerials from 1947 and 1968 indicate that the area currently farmed for rice was historically farmed for hay and wheat, indicating that this area would otherwise be dry land (NETR 2017). Flood irrigated rice fields are not discussed further in this section.

Perennial Drainage Canals

As a result of the jurisdictional delineation WoUS and WoS were identified within the BSA and include the RD 1001 Lateral 4 Channel, NCC, and NCC associated riparian habitat. The RD 1001 Lateral 4 Channel provides irrigation waters for the adjacent rice fields. Approximately 5,900 linear feet of the Lateral 4 Channel is within the Project area. The NCC flows east to west and confluences with the Sacramento River, approximately 2 miles southwest of the Project area. The RD 1001 Lateral 4 Channel and the NCC provided primary indicators for OHWM determined by completion of the USACE Arid West OHWM Datasheet, and do exhibit connectivity to other WoUS; therefore, for the purpose of the Project, these aquatic resources will be considered jurisdictional WoUS. Subsequently, these waters are also considered WoS. Approximately 5.15 acres of the Project area were delineated as perennial creek.

Avoidance and minimization measures **BIO-1** through **BIO-4** would be implemented.

- 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?*

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) *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) *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 Natomas Basin Habitat Conservation Plan promotes biological conservation in the Project and broader Natomas Basin; the Project would not conflict with the provisions within.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

The measures below will be implemented to avoid, minimize, or mitigate Project impacts.

BIO-1: Prior to the start of construction activities, the Project limits in proximity to jurisdictional waters shall be marked with high visibility Environmentally Sensitive Area (ESA) fencing or staking to ensure construction will not further encroach into waters. The Project biologist will periodically inspect the ESA to ensure sensitive locations remain undisturbed.

BIO-2: Contract specifications will include the following BMPs, where applicable, to reduce erosion during construction:

- Implementation of the Project shall require approval of a site-specific Storm Water Pollution Prevention Plan (SWPPP) or Water Pollution Control Program (WPCP) that would implement effective measures to protect water quality, which may include a hazardous spill prevention plan and additional erosion prevention techniques;
- Existing vegetation shall be protected in place where feasible to provide an effective form of erosion and sediment control;
- Stabilizing materials shall be applied to the soil surface to prevent the movement of dust from exposed soil surfaces on construction sites as a result of wind, traffic, and grading activities;
- Roughening and/or terracing shall be implemented to create unevenness on bare soil through the construction of furrows running across a slope, creation of stair steps, or by utilization of construction equipment to track the soil surface. Surface roughening or terracing reduces erosion potential by decreasing runoff velocities, trapping sediment, and increasing infiltration of water into the soil, and aiding in the establishment of vegetative cover from seed.
- Soil exposure shall be minimized through the use of temporary BMPs, groundcover, and stabilization measures;
- The contractor shall conduct periodic maintenance of erosion- and sediment-control measures.

BIO-3: To conform to water quality requirements, the Project must implement the following:

- Vehicle maintenance, staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants shall be a minimum of 100 feet from the live flowing water associated with the Natomas Cross Canal. Any necessary equipment washing shall occur where the water cannot flow into surface waters. The Project specifications shall require the contractor to operate under an approved spill prevention and clean-up plan;
- Construction equipment shall not be operated in flowing water; if necessary, equipment buckets and arms may be used within flowing water.
- Construction work shall be conducted according to site-specific construction plans that minimize the potential for sediment input to waters of the U.S. and State;
- Raw cement, concrete or concrete washings, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to aquatic life shall be prevented from contaminating the soil or entering surface waters;
- Equipment used in and around surface waters shall be in good working order and free of dripping or leaking contaminants; and,

- Any surplus concrete rubble, asphalt, or other debris from construction shall be taken to an approved disposal site.
- BIO-4:** All temporarily disturbed areas shall be restored onsite to pre-Project conditions or better prior to Project completion. Where possible, vegetation shall be trimmed rather than fully removed with the guidance of the Project biologist.
- BIO-5:** A focused rare plant survey shall be conducted pursuant to the *Protocols for Surveying and Evaluating Impacts to Species Status Native Plant Populations and Natural Communities* (CDFW 2018) during the woolly rose-mallow blooming season (June – September) prior to the start of construction. If construction is scheduled to occur during the species blooming season, the focused rare plant survey shall occur the year prior to construction. If the species or any other special status plant species are discovered during the focused rare plant surveys, additional ESA fencing or relocation shall be implemented to avoid and minimize impact to the species. Consultation with CDFW may be required to determine appropriate buffer distances and/or relocation of species populations.
- BIO-6:** Large diameter trees within the Project impact area will be protected in place to the greatest extent practicable. 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 1st – August 31st), one year prior to construction.
- BIO-7:** 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 nests are discovered within 1/4 mile of the Project Area, appropriate protective measures will be developed in coordination with CDFW.
- BIO-8:** Construction activity within habitat should be conducted between May 1st and October 1st. This is the active period for giant garter snakes and direct mortality is lessened, because snakes are expected to actively move and avoid danger. If work needs to occur between October 2 and April 30, authorization from the U.S. Fish and Wildlife Service Sacramento Office would be required to determine if additional measures are necessary to minimize take.
- BIO-9:** Confine clearing to the minimal area necessary to facilitate construction activities. Flag and designate avoided giant garter snake habitat within or adjacent to the Project area as Environmentally Sensitive Areas (ESAs). The area should be avoided by all construction personnel.
- BIO-10:** Construction personnel must receive worker environmental awareness training. Awareness training shall be given by the Project biologist(s) who have experience in giant garter snake natural history. This training instructs workers to recognize giant garter snake and their habitat(s).
- BIO-11:** 24-hours prior to construction activities, the Project area should be surveyed for giant garter snakes. Survey of the Project area should be repeated if a lapse in construction activity of two weeks or greater has occurred. If a snake is encountered during

construction, activities shall cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed. Report any sightings and any incidental take to the U.S. Fish and Wildlife Service Sacramento Office immediately by telephone at (916) 414-6600.

BIO-12: Any dewatered habitat should remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.

BIO-13: As a first order of construction, the Project contractor shall install GGS wildlife exclusion fencing (WEF) along the Project boundaries within suitable habitat prior to commencement of construction activities or staging of equipment, in order to prevent GGS individuals from entering the Project area during construction activities. WEF shall include the following:

- WEF shall consist of taught silt fencing supported by wooden stakes on the Project side only.
- WEF shall be buried a minimum of six (6) inches below ground and soil shall be compacted against the sides of the fence for its entire length to prevent special status species from passing under the fence.
- WEF shall extend 12 to 18 inches above the ground.
- The contractor shall inspect the WEF daily, and WEF shall be maintained, and repaired where necessary, throughout construction to ensure that it is functional and without defects, that the fencing material is taught and that the bottom edge of the fencing material remains buried.
- The Project biologist will periodically inspect the WEF to ensure it remains functional and appropriately maintained throughout construction.

BIO-14: After WEF has been installed, a USFWS-approved biologist shall survey the Project area for GGS individuals. If any GGS are found within the Project area the USFWS-approved Biologist shall relocate GGS to an area adjacent to, though outside of the construction area to appropriate habitat type as determined by the USFWS-approved biologist(s).

BIO-15: GGS may only be captured and handled by the USFWS-approved biologist(s). The USFWS-approved biologist(s) shall determine whether the animal should be captured and handled. The USFWS-approved biologist(s) shall minimize capture and handling to the extent feasible as most reptiles experience stress in response to capture and short-term confinement.

BIO-16: A biological monitor must be present during all initial ground disturbing activities and during all new excavation within 200 feet of GGS aquatic habitat during the GGS dormant season. If there is a break in work greater than 7 days, a biological monitor must be present during re-initiation of construction and ground disturbance/excavation within 200 feet of GGS aquatic habitat.

BIO-17: After completion of construction activities, remove any temporary fill and construction debris and, wherever feasible, restore disturbed areas to pre-Project conditions. Restoration work may include such activities as replanting species removed from banks or replanting emergent vegetation in the active channel.

- BIO-18:** Temporary impacts to GGS habitat will be compensated-restored at 1:1 (13.22 acres) with one year of monitoring, permanent loss of rice-aquatic habitat will be compensated at 43:1 (0.30156 acres), and permanent impact-to-other-loss of GGS upland habitat will be compensated at 3:1 (0.5447 acres). The Project proponent will purchase a total of 0.84210 acres of GGS mitigation credits from a USFWS and CDFW approved mitigation bank to offset permanent and temporary impacts.
- BIO-19:** To avoid impacts to western pond turtles, the Project biologist will conduct a pre-construction survey of the all aquatic and upland habitats within the Project area. Surveys will be conducted no more than 24 hours prior to onset of construction. If a turtle is located within the construction area, a qualified biologist will capture the turtle and relocate it to an appropriate habitat a safe distance from the construction site.
- BIO-20:** After WEF has been installed, the Project biologist shall survey the Project area for western pond turtle individuals that may have become entrapped within the Project area. If any western pond turtles are found within the Project area, a qualified biologist shall relocate the species to an area adjacent to, though outside of the construction area to appropriate habitat type as determined by the Project biologist.
- BIO-21:** If water pumps are used to dewater the Project Area, pump intakes will be screened and equipped with an energy dissipater to protect aquatic species. The energy dissipater should be large enough to reduce approach velocity to 0.33 feet per second or less and be enclosed with ½ inch metal screen. The surface area of the energy dissipater shall be determined by dividing the maximum diverted flow, by the allowable approach velocity (example: 1.0 ft³ per second/ 0.33 feet per second = 3.0 ft² surface area).
- BIO-22:** Vegetation removal or earthwork shall be minimized during the nesting season (February 1st – August 31st). If vegetation removal is required during the nesting season (February 1st – August 31st), a pre-construction nesting bird survey must be conducted within 7-3 days prior to vegetation removal. Within 2 weeks of the nesting bird survey, all vegetation cleared by the biologist will be removed by the contractor.
- A minimum 100-foot no-disturbance buffer will be established around any active bird nests of migratory birds—and a minimum 300-foot no-disturbance buffer will be established around any nesting raptor species. The surveying biologist may increase the 100-foot no-disturbance buffer around an active bird nest if deemed necessary. The contractor must immediately stop work in the buffer 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 consultation with wildlife agencies) 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 CDFW.
- BIO-23:** Prior to arrival at the Project site and prior to leaving the Project site, construction equipment that may contain invasive plants and/or seeds must be cleaned to reduce the spreading of noxious weeds.
- BIO-24:** All hydro seed and plant mixes must consist of a biologist approved native seed mix.

BIO-25: The contractor must not use herbicides to control invasive, exotic plants or apply rodenticides during construction.

BIO-26: To allow subterranean wildlife enough time to escape initial clearing and grubbing activities, equipment used during initial clearing and grubbing must be operated at speeds no greater than 3 miles per hour.

BIO-27: 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.

FINDINGS

Considering the information included in the Biological Resources Report dated May 2020, the following significance determinations have been made: Direct impacts to the giant garter snake (GGS) would be avoided to the greatest extent practicable; however, the Project cannot completely avoid temporary and permanent effects to GGS habitat. Project effects to Swainson's hawk include the removal of 0.09 acres of annual grassland, which is nominal and no compensatory mitigation for foraging habitat is proposed. The Project would result in permanent and temporary effects to jurisdictional Water of the U.S., Waters of the State, and CDFW jurisdictional habitats. The necessary permits would be acquired from the respective agencies prior to work within the area. Biological impacts would be **Less than Significant with Mitigation Incorporated**.

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 10564.5[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 a 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 convey its historic significance and qualify 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, relocation, 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

The Project area of potential effect (APE) encloses approximately 1,245 ft. along the NCC North Levee, expanding as much as 115 ft. southeast into the NCC; the APE extends north then northwest for about 1.03 miles (5,480 ft.) at a width of 75 ft. In all, the APE area amounts to approximately 17.7 acres.

Conforming to the prescribed depth of ground disturbance associated with specific Project activity, the vertical APE for the Project extends to a range of depths:

- 2 - 4 ft. on the waterside embankment of the NCC North Levee for piping installation.
- 4 ft. at waterside toe of Levee for outfall structure construction.
- 6 ft. for vault installation within the NCC North Levee.
- 12 ft. at the landside toe of the of the Levee for pump station appurtenances.
- 16 ft. for pile driven 12 in. diameter support columns.

Ground disturbance associated with Lateral 4 Canal improvements would range from >2 in. at the north end of the APE, graduating to a maximum depth of 2 ft. at its connection with the proposed pump station at the toe of the Levee.

DISCUSSION

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

Less than Significant Impact. Based on the proximity to the Sacramento and Feather Rivers, the availability of important resources, and presence of Holocene aged soils, the APE lies within an area determined to be of *high* sensitivity for prehistoric activity (Meyer and Rosenthal 2008). However, the APE was subject to regular or semi-permanent inundation and repeated episodes of sediment deposition as a non-tidal marsh prior to historic era reclamation efforts. As such, it is unlikely that the APE was the focus of repeated or sustained prehistoric human occupation. Prehistoric activity within and adjacent to the Project APE would more likely have been ephemeral and limited to more transitory water-borne activities such as wild game procurement (i.e. fish, waterfowl) and/or the gathering of riparian plant resources. These kinds of activities are more typically reflected in the occurrence of isolated artifacts than archaeological assemblages. 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.

Three historic-era resources were identified in the APE Site 2666-1, a segment of the North Levee of the NCC (North Levee); Site 2666-2, the Lateral 4 Canal; and Site 2666-3, a segment of the NCC channel. The North Levee (2666-1) stands to incur most of the ground disturbing activities associated with Project construction. The Lateral 4 Canal (2666-2) would be deepened, but otherwise undergo little change beyond that which it typically encounters as regular maintenance on a seasonal basis. The small portion of the NCC (2666-3) within the APE would incur little to no impact at all resulting from the Project. All three sites would fully retain their original locational alignment, basic compositional materials, and essential overall function.

In applying the criteria of adverse effect [36 CFR § 800.5(a)(1)] and the Secretary of the Interior Standards for the Treatment of Historic Properties [36 CFR § 68.3(a)] to the proposed Project, the proposed undertaking would not fundamentally alter any of the existing characteristics contributing to the assumed eligibility of any of the abovementioned resources. A finding of no adverse effect to historic properties is recommended for this undertaking, pursuant to 36 CFR § 800.5(b).

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

Less than Significant with Mitigation Incorporated. In an effort to identify archaeological resources that might be affected by the undertaking, a pedestrian survey, background research,

and consultation with individuals and organizations were conducted. A record search conducted at the Northeast Information Center of the California Historical Resources Information System identified no cultural resources within a one-mile radius of the APE and no resources within the APE. The pedestrian survey on March 23, 2020 did not observe any cultural resources within the APE.

On March 6, 2020, Dokken Engineering sent a letter and a map depicting the Project vicinity to the NAHC in West Sacramento, asking the commission to review the sacred land files for any Native American cultural resources that might be affected by the Project. The request to the NAHC seeks to identify any Native American cultural resources within or adjacent to the Project area. On March 12, 2020, the NAHC informed Dokken Engineering that a review of the sacred lands was completed and returned negative results.

At this time 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 of the visual survey, record search, no impacts are anticipated for the Project related to archaeological resources. With any project, there is always the possibility that unknown cultural resources may be encountered during construction. With the implementation of Mitigation Measure **CR-1** potential impacts from the Project would be less than significant with mitigation incorporated.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less than Significant with Mitigation Incorporated. All identification efforts for cultural resources did not indicate a likelihood for the presence of human remains in the project area. However, with any project, there is always the possibility that unmarked burials may be unearthed during construction. Without best practices in place, this impact would be considered potentially significant. Implementation of Mitigation Measure **CR-2** would reduce this to a **Less than Significant Impact with Mitigation Incorporated**.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

CR-1: If previously unidentified cultural materials are unearthed during construction, work shall be halted in that area until a qualified archaeologist can assess the significance of the find and develop a plan for documentation and removal of resources if necessary. Additional archaeological survey would be needed if Project limits are extended beyond the present survey limits.

CR-2: Section 5097.94 of the Public Resources Code and Section 7050.5 of the California Health and Safety Code protect Native American burials, skeletal remains and grave goods, regardless of age and provide method and means for the appropriate handling of such remains. If human remains are encountered, work should halt in that vicinity and the county coroner should be notified immediately. At the same time, an archaeologist should be contacted to evaluate the situation. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within twenty-four hours of such identification. CEQA details steps to be taken if human burials are of Native American origin.

FINDINGS

The Project would have **Less Than Significant Impacts with Mitigation Incorporated** 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) *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 BMPs and the Sutter County General Plan to ensure that no potentially significant environmental impact would occur due to wasteful, inefficient, or unnecessary consumption of energy resources.

b) *Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

No Impact. The Project would not conflict with or obstruct any state or local plans for renewable energy or energy efficiency.

FINDINGS

The Reclamation District 1001 Auxiliary Drainage Pump Station Project would have **No Impact** on energy resources nor would it conflict with energy efficiency.

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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 Capay series soils, typical within flood basins frequently overlain by alluvial sources.

DISCUSSION

- 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?*
- ii) *Strong seismic ground shaking?*
- iii) *Seismic-related ground failure, including liquefaction?*

iv) Landslides?

No Impact. The Project would not substantially change the existing conditions such that it would result in new risks of exposing 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.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. The proposed project would require ground disturbing activities within the Lateral 4 Canal as well as on the banks of the NCC. Improvements associated with the proposed pump station, particularly where the pump station would outfall irrigation and flood waters to the NCC has some potential to result in erosion and loss of topsoil when the pump station is active. In order to reduce the potential for erosion, the proposed project has been design with erosion control measures including use of rock slop protection around the pump station outfall. Furthermore, erosion control practices would be required of the project as part of the Stormwater Pollutant Prevention Plan (SWPPP). This is discussed further in Section 2.10. With inclusions of these design feature, and adherence to SWPPP requirements, impacts associated with erosion and loss of topsoil would be considered less than significant.

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?

Less than Significant Impact. Capay, silty clay is commonly found on basin floors. A less than significant impact to stability may temporarily occur during construction, but the risk of landslide, lateral spreading, subsidence, liquefaction, or collapse is low due to the slope and the water storage profile.

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?

Less than Significant Impact. Soils within the Natomas Basin and Sutter County area are considered to be expansive soils; however these conditions are not expected to result in the potential for new risks to life or property as a result of the proposed irrigation and flood control improvements.

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?

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) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact. 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.

FINDINGS

The Project would have **Less than Significant Impacts** 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 CO₂, CH₄, NO_x, 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, which 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 is 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 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 EPA does have the authority to regulate GHG. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting GHG emissions. ^[1]

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

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

be compared with the effects of past, current, and probable future 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 only be during construction.

DISCUSSION

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

Less than Significant Impact. The Project would generate an extremely small amount of GHG emissions through the occasional use of a propane power units to operate the pump station when electrical power is not available. Short term GHG emissions would also occur during construction through the use of gas-powered construction vehicles. Neither of these uses is expected to generate CO₂ in quantities that would individually or cumulatively contribute to a significant impact on the environmental.

- b) *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 emission.

FINDINGS

The Project would have a Less and Significant Impact as it relates 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 auxiliary drainage pump station is adjacent to Levee Road, which would be utilized to transport and remove items during construction. There are no cleanup sites within or in close vicinity of the Project area. There are two abandoned and plugged wells located outside of the project area: one approximately 1,000 feet from the southwest corner of the project boundary and another approximately 1,300 feet from the northwest corner of the project boundary.

DISCUSSION

- a) *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 grading, filling, and the 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 hazard to people, animals, or plants. 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.

- 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?*

Less than Significant Impact. Potential hazardous materials during construction activities could occur due to disturbance. However, the release of such hazardous materials associated with construction is unlikely with the implementation of a Spill Containment and Countermeasure Plan that would be required of the project prior to the start of construction.

- c) *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. No schools are located within one-quarter mile of the Project site.

- 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?*

No Impact. EnviroStor and GeoTracker were used to find active hazardous waste sites within the Project vicinity. A review of the Department of Toxic Substances Control EnviroStor Database indicated that there were no sites on or near the Project area.

- 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 would not result in a safety hazard for people residing or working in the Project area as the Project is not within the vicinity of an airport land use plan or within two miles of a public airport or public use airport.

- f) *Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

No Impact. Due to the location and lack of residential use in the Project area, there would no effect on emergency response or evacuation.

- 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?*

No Impact. The Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires, and no wildlands are adjacent to or within the Project area.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

Avoidance measures would be implemented through the use of Best Management Practices (BMP) below.

- The contractor shall prepare a Spill Prevention, Control, and Countermeasure Program (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.
- No wells have been identified within the project area; should a well be encountered during construction the California Department of Conservation Geologic Energy Management Division (CalGEM) will be notified immediately.

FINDINGS

The Project would have **Less than Significant Impacts** as it pertains 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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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

Section 401 of the Clean Water Act (CWA) requires water quality certification from the State Water Resources Control Board (SWRCB) or from a Regional Water Quality Control Board (RWQCB) when the project requires a CWA Section 404 permit. Section 404 of the CWA requires a permit from the U.S. Army Corps of Engineers (Corps) to discharge dredged or fill material into waters of the United States.

Along with CWA Section 401, CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit for the discharge of any pollutant into waters of the United States. The federal Environmental Protection Agency has delegated administration of the NPDES program to the SWRCB and nine RWQCBs. The SWRCB and RWQCB also regulate other waste discharges to land within California through the issuance of waste discharge requirements under authority of the Porter-Cologne Water Quality Act.

AFFECTED ENVIRONMENT

The entire Project area is within FEMA Zone A, designated as a Special Flood Hazard Area subject to inundation by the 1% annual chance of flood. The Project site occurs at an elevation of approximately 11-45 feet above mean sea level. A Hydraulic Analysis Report was prepared for this project which analyzed and modeled the project's potential to cause a channel blockage and to result in increased water surface elevation within or downstream of the NCC.

DISCUSSION

- a) *Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

Less than Significant with Mitigation Incorporated. The Project would disturb greater than one acre, therefore a Construction Storm Water 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 RD1001 to prepare and implement a SWPPP with the intent of keeping all products of erosion from moving off site into receiving waters. The SWPPP includes BMPs to prevent construction pollutants from entering storm water runoff. By preparing and following the stormwater BMPs provided in the SWPPP, the Project impacts to water quality would be **Less than Significant**.

- b) *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 not directly or indirectly result in the construction of uses that would utilize groundwater supplies.

- 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;*
 - (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 proposed project would construct an auxiliary pump station to provide backup water conveyance during flood conditions when the main pump station is inoperable due to power outages. This project would substantially redirect the existing drainage pattern by directing low water flows to the pump station within the Lateral 4 canal and creating a new outfall structure where pumped water would drain into the NCC. However, the project has been designed to minimize or avoid erosion through the use of rock slop protection and the additional outflow would not create or contribute runoff water which would exceed the capacity of existing stormwater drainage systems. The project purpose is to reduce the risk of flooding and flood damage by providing an additional outlet for flood waters so no addition flood risk is anticipated. By including the appropriate design features to minimize erosion, the project is expected to have a less than significant impact on drainage patterns and water quality.

A Hydraulic Analysis Report was prepared in May of 2020 for this project. The purpose of this study was to provide a detailed analysis methodology and results of a channel blockage calculation and the potential for such a condition to result in a change in the existing water surface elevation of the NCC. This study concluded that the proposed improvements associated with the Auxiliary Pump Station would have minimal effects on the flood control performance of the NCC. The modeled obstruction of project features would not cause any significant increase in water surface elevation under a backwater condition. More specifically, this is further indicated by the

change in water surface elevation of less than +0.01 feet when comparing pre- and post-project conditions. Based on these findings, the proposed Auxiliary Pump Station Project would not affect the operability or flow capacity of the NCC.

d) *In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?*

Less than Significant Impact. The Project is located in a floodplain. To minimize the potential for release of pollutants due to inundation, preliminary plans would locate the propane tanks and the power units outside the 100-year floodplain. The propane tanks would be located above ground near the top of the existing levee on the northwest side of the NCC and the power units, which would use engine oil and coolant, would be located on the pump station platform. The mechanical components of the pumps would contain gear oil for lubrication, however, these components would operate within a sealed case to minimize the possibility of leaks and associated water quality impacts. The propane tanks, power units, and the mechanical components of the pumps are the only sources of water quality pollutants that could be released. By locating these facilities above the 100-year floodplain (propane tanks and power units), or by designing them to operate within a sealed case (mechanical pumps), the project would greatly reduce the potential for release of pollutants into surface waters or the land directly adjacent to those waters.

e) *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.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

To conform to water quality requirements, the Project would implement the following Best Management Practices:

- Vehicle maintenance, staging and storing equipment, materials, fuels, lubricants, solvents, and other possible contaminants shall be located at the top of the Natomas Cross Canal levee or a minimum of 100 feet from the Natomas Cross Canal. Any necessary equipment washing shall occur where the water cannot flow into surface waters. The Project specifications shall require the contractor to operate under an approved spill prevention and clean-up plan.
- Construction equipment shall not be operated in flowing water; if necessary, equipment buckets and arms may be used within flowing water.
- Construction work shall be conducted according to site-specific construction plans that minimize the potential for sediment input to waters of the U.S. and State.
- Raw cement, concrete or concrete washings, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to aquatic life shall be prevented from contaminating the soil or entering surface waters.
- Equipment used in and around surface waters shall be in good working order and free of dripping or leaking contaminants.
- Any surplus concrete rubble, asphalt, or other debris from construction shall be taken to an approved disposal site.

FINDINGS

Considering the information included in the Aquatic Resource Delineation Report and the Hydraulic Analysis Report both of which are dated May 2020, the following significance determinations have been made: On-site waters are limited to the RD 1001 Lateral 4 Channel and Natomas Cross Canal and approximately 5.15 acres (5,900 linear feet) of potential Waters of the United States were mapped as perennial drainage canals. The Project will have a **Less than Significant Impact** on these water resources with inclusion of BMPs and following the requirements of a SWPPP during construction. The project would result in a less than +0.01 foot water surface elevation increase and would not result in a flood water obstruction during a blockage of the NCC causing backwater flooding.

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) *Physically divide an established community?*

No Impact. The Project is not in or near a residential area and would not divide an established community.

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?*

No Impact. The Project does not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted for the purpose of avoiding or mitigating an environmental effect.

FINDINGS

The Project does not physically divide an established community or conflict with any land use plan, policy, or regulation designed to avoid or mitigate an environmental effect. **No Impact** to Land Use and Planning would occur.

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) *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 *Sutter County General Plan, 2011*, the Project area does not have known mineral resources that would be of value to the region and the residents of the state.

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?*

No Impact. According to the *Sutter County General Plan, 2011*, the Project area does not have any areas that are listed as a locally-important mineral resource recovery site.

FINDINGS

There are no areas within Sutter County designated by the State Mining and Geology Board to have regional or statewide significance (*Sutter County General Plan, 2011*).

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 type="checkbox"/>	<input checked="" 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

The Project area is within agricultural land in Sutter County with background noise from State Route 99 approximately 2 miles to the east and Sacramento International Airport approximately 6 miles to the south.

DISCUSSION

- 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?*

No Impact. The ambient noise would increase temporarily during construction activities; however, there are no sensitive receptors within 500 feet of the project area that would be affected by construction noise. As a result, there would be No Impact as a result of construction noise. Propane power units would generate noise when in operation; however, the power units would be used very intermittently (only when the main pump station is not operational). Furthermore, no impacts to sensitive receptors would occur since there are none present within 500 feet of the auxiliary pump station.

- b) *Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?*

No Impact. Groundborne vibration would increase temporarily during construction activities, but would not expose people to such vibration due to the location of the site.

- 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 or adjacent to an airport land use plan, or where such a plan has not been adopted, or within two miles of a public airport or public use airport; therefore, no impact would occur, and no mitigation is required.

FINDINGS

No Impacts associated with generation of noise and vibration are expected because no sensitive receptors are close enough to be affected by noise and vibration generated by construction activities.

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 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 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) *Induce substantial 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 is located in rural Sutter County that supports agricultural land. The Project would not induce population growth in the area, either directly or indirectly.

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

No Impact. The Project would not displace any existing housing or necessitate the construction of replacement housing since there are no residential units in the area.

- c) *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?*

No Impact. The Project is not in a residential area nor are there residential units in the Project area.

FINDINGS

The auxiliary drainage pump station would have **No Impacts** on the population or housing in the area.

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 Sutter County, which consists of agricultural lands and would have no effect on fire protection, police protection, schools, parks, or other public facilities.

FINDINGS

The auxiliary drainage pump station would have **No Impacts** on the 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 would not increase the use of existing parks or other recreational facilities due to the location and nature of the Project.

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?*

The Project does not include other recreational facilities, nor does it require the construction or expansion of other recreational facilities.

FINDINGS

The Project would have **No Impact** on any parks or recreational facilities.

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

No Impact. As the Project is an auxiliary pump station and not part of the transportation infrastructure, there would be no impact to transportation or traffic.

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.

c) *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.

d) *Result in inadequate emergency access?*

No Impact. The Project would have no effect on emergency access.

FINDINGS

The Reclamation District 1001 Auxiliary Drainage Pump Station Project would have **No Impact** on the transportation infrastructure or traffic in the Project area.

2.18 TRIBAL CULTURAL RESOURCES

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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 tribal cultural resources (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, mitigated negative declaration, or 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 either of the following:

Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either 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 California Public Resources Code (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

The Project area of potential effect (APE) encloses approximately 1,245 ft. along the NCC North Levee, expanding as much as 115 ft. southeast into the Natomas Cross Canal; the APE extends north then northwest for about 1.03 miles (5,480 ft.) at a width of 75 ft. In all, the APE area amounts to approximately 17.7 acres.

Conforming to the prescribed depth of ground disturbance associated with specific Project activity, the vertical APE for the Project extends to a range of depths:

- 2 - 4 ft. on the waterside embankment of the NCC North Levee for piping installation
- 4 ft. at waterside toe of Levee for outfall structure construction
- 6 ft. for vault installation within the NCC North Levee
- 12 ft. at the landside toe of the of the Levee for pump station appurtenances
- 16 ft. for pile driven 12 in. diameter support columns

Ground disturbance associated with Lateral 4 Canal improvements would range from >2 in. at the north end of the APE, graduating to a maximum depth of 2 ft. at its connection with the proposed pump station at the toe of the Levee.

DISCUSSION

- 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)*

Less than Significant Impact. Based on the proximity to the Sacramento and Feather Rivers, the availability of important resources, and presence of Holocene aged soils, the APE lies within an area determined to be of *high* sensitivity for prehistoric activity (Meyer and Rosenthal 2008). However, the APE was subject to regular or semi-permanent inundation and repeated episodes of sediment deposition as a non-tidal marsh prior to historic era reclamation efforts. As such, it is unlikely that the APE was the focus of repeated or sustained prehistoric human occupation. Prehistoric activity within and adjacent to the Project APE would more likely have been ephemeral and limited to more transitory water-borne activities such as wild game procurement (i.e. fish, waterfowl) and/or the gathering of riparian plant resources. These kinds of activities are more typically reflected in the occurrence of isolated artifacts than archaeological assemblages. 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.

- 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.*

Less than Significant Impact with Mitigation Incorporated. To help determine whether the Project may have an effect, Public Resources Code 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.

Letters and a map depicting the Project vicinity were sent to the Native American Heritage Commission (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 seeks 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 March 12, 2020, the NAHC informed Dokken Engineering (working on behalf of RD 1001) via email that a search of the sacred lands file was completed with negative results.

On May 12, 2020, 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 1001 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 (Appendix E). Letters were sent to the following tribal governments: Enterprise Rancheria / Estom Yumeka Maidu Tribe, Mechoopda Indian Tribe of Chico Rancheria, Mooretown Rancheria of Maidu Indians, Strawberry Valley Rancheria and the United Auburn Indian Community of the Auburn Rancheria.

Note that USACE will also consult Native American groups independently as part of their NHPA Section 106 responsibilities.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No tribal cultural resources have been identified in the project area, however, there is always the possibility that unmarked cultural materials or human remains may be unearthed during construction. Measures CR-1 and CR-2 would ensure that if such discoveries are made during construction, they would be evaluated by the appropriate personnel to ensure impacts to tribal resources are minimize or mitigated as necessary.

FINDINGS

No tribal cultural resources have been identified through records search, pedestrian survey and Native American Consultation. Should previously unknown resources be uncovered during construction measures are in place to ensure that the project would have a **Less than Significant Impact with Mitigation Incorporated**.

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 checked="" type="checkbox"/>	<input 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 location of the existing drainage pump station and additional area that includes the build alternative mapped in Figure 3.

DISCUSSION

- 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?*

Less than Significant Impact. The Project would result in the construction of a new auxiliary drainage pump station, which would provide improved infrastructure to reduce the risk of flood and the damages caused by flooding. No other utilities would be affected by the project.

- b) *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) *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.

- 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?*

Less than Significant Impact. A small amount of solid waste associated with construction activities may be generated; however, the construction contractor would be required to dispose of said waste at an appropriate waste disposal facility or landfill.

e) *Comply with federal, state, and local statutes and regulations related to solid waste?*

No Impact. The Project would comply with federal, state, and local statutes and regulations related to solid waste.

AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES

No avoidance, minimization, and/or mitigation measures are required for utilities and service systems.

FINDINGS

The Reclamation District 1001 Auxiliary Drainage Pump Station Project would provide improved infrastructure to discharge drainage flows from agricultural farmland in the area. The project would result in 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) *Substantially impair an adopted emergency response plan or emergency evacuation plan?*

No Impact. The Project would not impair an adopted emergency response plan or emergency evacuation plan.

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?*

No Impact. The Project would not exacerbate wildfire risks.

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?*

No Impact. The Project would not require infrastructure that may exacerbate fire risk.

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?*

No Impact. The Project would not expose people or structures to downslope or downstream flooding or landslides as the Project is designed to reduce the risk of flooding.

FINDINGS

The Reclamation District 1001 Auxiliary Drainage Pump Station Project would have **No Impact** to risks associated with wildfire in the area.

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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 with Mitigation Incorporated. Implementation of the Project would have the potential to degrade the quality of the existing environment. Potential impacts have been identified related to Air Quality (2.3) Biological Resources (2.4), Cultural Resources (Section 2.5), and Tribal Cultural Resources (Section 2.18). Mitigation measures have been identified related to individual resource-specific impacts. The project has the potential to have impacts to several wildlife species including giant garter snake, Swainson’s Hawk, Western Pond Turtle, and migratory birds; however, mitigation measures would reduce the level of all Project-related impacts to less than significant levels.

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)?*

No impact. The Project would not have adverse environmental impacts at a significant level. All potential significant impacts would be addressed with avoidance, minimization, and mitigation measures and would not result in cumulatively considerable impacts.

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

No Impact. The Project would have no adverse effects, directly or indirectly, on humans.

FINDINGS

The Reclamation District 1001 Auxiliary Drainage Pump Station Project **does not** have the potential to 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, 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; nor have impacts that are individually limited, but cumulatively considerable; nor have 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 1001'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 Reclamation District 1001 Auxiliary Drainage Pump Station.

- California Department of Fish & 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 Draft IS/MND public review and comment period for the Project ~~will occur~~ed from September 9, 2020 to October 8, 2020. All written comments received by Reclamation District 1001 ~~have been~~will be incorporated into the Final Initial Study/Mitigated Negative Declaration and added in ~~an~~a Appendix E. Any additions or corrections to the IS/MND subsequent to public comments ~~have been~~will be addressed within ~~this~~e final IS/MND document noted with underline for additions and strikethrough for deletions.

4.0 Distribution List

A Notice of Availability was distributed to all residences within a 0.5-mile radius of the project area and to the following agencies and interested parties (unless IS hardcopies specified).

Reclamation District 1001
Attn: Tom Engler
Acting General Manager
1959 Cornelius Ave.
Rio Oso, CA 95674
(IS hardcopy)

Federal Government

United States Fish and Wildlife Service
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, CA 95825

National Marine Fisheries Service
5-100, 650 Capitol Mall
Sacramento, CA 95814

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

US 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 Region 4
1234 E. Shaw Avenue
Fresno, CA 93710

Local Agencies

Sutter County Clerk-Recorder
433 Second Street
Yuba City, CA 95991

5.0 List of Preparers

Dokken Engineering

Tim Chamberlain, Senior Environmental Planner
Chris Aguirre, Public Outreach Director
Andrew Dellas, Associate Environmental Planner/Biologist
John Fogerty, Associate Environmental Planner/Archaeologist

Wood Rodgers Inc.

Peter Blum, PE

MBK Engineers

Thomas Engler, PE
Tony Deus, PE

Reclamation District 1001

Thomas Engler, PE, Acting General Manager
Joe Henderson, General Manager

6.0 References

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

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

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

Department of Conservation. Fault Activity Map of California (2010). Available at: <https://maps.conservation.ca.gov/cgs/fam/>

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

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

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

State Water Resources Control Board. Impaired Water Bodies. Available at: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml

Sutter County. Natomas Basin Habitat Conservation Plan. Chapter 3 Affected Environment. Available at: https://www.suttercounty.org/doc/government/depts/ds/ps/cs_natomas

Sutter County 2030 General Plan. Adopted 2011. Available at: https://www.suttercounty.org/assets/pdf/cs/ps/General_Plan_Policy_Document.pdf

Appendix A: CNDDDB, USFWS, and CNPS Special Status Species Database Results

Appendix B: Special Status Species Table

Common Name	Species Name	Status	General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Amphibian Species					
California red-legged frog	<i>Rana draytonii</i>	Fed: T State: -- CDFW: --	Inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development and must have access to estivation habitat; estivation occurs late summer-early winter. Breeds from late November to late April Occurs from elevations near sea level to 5,200 ft.	A	Presumed Absent: The BSA does contain permanent aquatic habitat; however, the species is believed to have been extirpated from the floor of the Central Valley by the 1960s (USFWS 2002). The BSA is located within the floor of Central Valley and is outside of the current range of the species. The species is presumed absent from the BSA based on a lack of suitable habitat and the BSA being located outside of the current range of the species.
California tiger salamander	<i>Ambystoma californiense</i>	Fed: E State: T CDFW: WL	Inhabits annual grasslands, oak savanna, mixed woodland edges, and lower elevation coniferous forest. Requires underground refuges, especially ground squirrel burrows, vernal pools, or other seasonal water sources for breeding. Breeding occurs December through February in fish-free ephemeral ponds.	A	Presumed Absent: The BSA does not provide suitable vernal pool habitat and no CNDDDB records of the species are within 10 miles of the BSA. Due to the lack of suitable habitat, and local occurrences, the species is presumed absent from the BSA.
western spadefoot	<i>Spea hammondi</i>	Fed: -- State: -- CDFW: SSC	The species inhabits burrows within grassland but is occasionally found in valley foothill hardwood woodland communities. Requires vernal, shallow, temporary pools formed by heavy winter rains for reproduction. Breeds late winter - March.	A	Presumed Absent: The BSA lacks any vernal pools, which is a breeding requirement for this species. CNDDDB search indicates that the only individual reported in the area was approximately 11 miles from the BSA. The species is presumed absent from the BSA based on the lack of suitable breeding habitat and the distance to regional occurrences.

Common Name	Species Name	Status	General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Bird Species					
bank swallow	<i>Riparia riparia</i>	Fed: -- State: T CDFW: --	A migratory colonial nester inhabiting lowland and riparian habitats west of the desert during spring - fall. Majority of current breeding populations occur along the Sacramento and Feather rivers in the north Central Valley. 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, often in large colonies. These colonies are located near large bodies of water so that there is ample room for vertical flying. Breeds May-July.	A	Presumed Absent: The BSA does not contain cliffs or vertical banks this species needs for nesting. The nearest recent CNDDDB occurrence of the species is located approximately 4 miles from the BSA recorded at large cliff areas on the Sacramento River. The species is presumed absent based on the lack of nesting habitat within the BSA and the low number of regional occurrences.
burrowing owl	<i>Athene cunicularia</i>	Fed: -- State: -- CDFW: SSC	Species inhabits arid, open areas with sparse vegetation cover such as deserts, abandoned agricultural areas, grasslands, and disturbed open habitats. Requires friable soils for burrow construction (Below 5,300 feet).	A	Presumed Absent: The BSA does not contain potentially suitable habitat for the species. Additionally, burrowing owl and/or potentially suitable burrows were not observed during biological field surveys. The nearest CNDDDB occurrence of the species is located approximately 3.5 miles from the BSA. The species is presumed absent of occurring within the BSA based on the absence of potentially suitable habitat and a low number of recent regional occurrences.
Mountain plover	<i>Charadrius montanus</i>	Fed: -- State: -- CDFW: SSC	California winter resident from September to March. Found on short grassland and plowed fields on the Central Valley from Sutter and Yuba counties southward. Does not nest in California.	A	Presumed Absent: The BSA does not contain potentially suitable habitat for the species. Additionally, the species does not nest in California, and is not known to occur within the spring and summer months when the project would occur. The nearest CNDDDB occurrence of the species is located approximately 12 miles from the BSA. The species is

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
						presumed absent of occurring within the BSA based on the absence of potentially suitable habitat and timeline of project.
Swainson's hawk	<i>Buteo swainsoni</i>	Fed: State: 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	High Potential: The BSA does contain potentially suitable large nesting trees; and potentially suitable large nesting trees directly adjacent to the BSA. Additionally, the BSA does contain potentially suitable foraging habitat and open agricultural lands for potential foraging are adjacent to the BSA. A recent (2004) CNDDDB occurrence of nesting Swainson's hawk is located directly adjacent to the BSA. The species is considered to have a high potential of occurring within the BSA, or within ¼ mile of the BSA, based on presence of potentially suitable habitat and a recent local occurrences.
tricolored blackbird	<i>Agelaius tricolor</i>	Fed: State: CDFW:	-- CE SSC	Prefers freshwater marsh, swamp and wetland communities, but utilize agricultural or upland habitats that can support large colonies often in the Central Valley area. Requires protected dense nesting habitat protected from predators, be within 3-5 miles to a suitable foraging area with insect prey and within 0.3 miles of open water. Suitable foraging includes wetland, pastureland, rangeland, at dairy farms, and in some irrigated croplands (silage, alfalfa, etc.). Nests mid-march - early August, but may extend until October/November in the Sacramento Valley region.	A	Presumed Absent: The BSA does not contain suitable foraging habitat or nesting habitat to support colony of the species. A CNDDDB occurrence of a colony along the Sacramento River located approximately 2 miles from the BSA has been listed as extirpated, and no individuals have been noted in 2011 or 2014 as part of the triennial statewide surveys for the species. Therefore, the species is presumed absent from the BSA, due to the lack of suitable habitat and the potential extirpation of the species from the area.

Common Name	Species Name	Status	General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Yellow-Billed Cuckoo	<i>Coccyzus americanus</i>	Fed: T State: E CDFW: --	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-August.	A	Presumed Absent: The BSA does not contain potentially suitable riparian habitat; however, the riparian habitat within the BSA consists of sparsely distributed large black willow trees. No dense blocks of riparian habitat occur within the BSA. The nearest recent (2006) CNDDDB occurrence of the species is located approximately 5 miles from the BSA in dense riparian forest along the Sacramento River. The species is considered to be presumed absent of occurring within the BSA based on the absence of potentially suitable nesting habitat and a distance of recent regional occurrences.
Fish Species					
chinook salmon - Central Valley spring-run ESU	<i>Oncorhynchus tshawytscha</i>	Fed: T State: T CDFW: --	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.	A	Presumed Absent: The BSA does not contain suitable habitat for anadromous fish, and the irrigation canal does not have direct connection to Cross Canal or the Sacramento River. The CNDDDB search illustrated occurrences of the species in the Sacramento and Feather Rivers approximately 2 miles west of the BSA. The species is considered to be absent from occurring within the BSA based on absence of potentially suitable habitat.
Delta smelt	<i>Hypomesus transpacificus</i>	Fed: T State: E CDFW: --	Occurs within the Sacramento-San Joaquin Delta and seasonally within the Suisun Bay, Carquinez Strait and San Pablo Bay. Most often occurs in partially saline waters.	A	Presumed Absent: The BSA does not contain saline water habitats. There are no occurrences of the species within the 20 mile CNDDDB search. The species is considered to be presumed absent of occurring within the BSA based on the absence of potentially suitable habitat and a low number of recent regional occurrences.

Common Name	Species Name	Status	General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Eulachon	<i>Thaleichthys pacificus</i>	Fed: T State: -- CDFW: --	This species is endemic to the northeastern Pacific Ocean; they range from northern California to southwest and south-central Alaska and into the southeastern Bering Sea. They spend more than 95 percent of their life in the marine environment, and only enter freshwater systems during spawning, egg and early larval stages.	A	Presumed Absent: The BSA does not contain suitable habitat for the species, and the irrigation canal does not have direct connection to Cross Canal or the Sacramento River. The CNDDDB search illustrated occurrences of the species in the Sacramento and Feather Rivers approximately 2 miles west of the BSA. The species is considered to be absent from occurring within the BSA based on absence of potentially suitable habitat.
Longfin smelt	<i>Spirinchus thaleichthys</i>	Fed: C State: T CDFW: --	Within California, occurs slightly upstream from Rio Vista (on the Sacramento River in the Delta). Resides in California and are primarily an anadromous estuarine species that can tolerate salinities ranging from freshwater to nearly pure seawater. Prefers temperatures in the range of 16-18°C and salinities ranging from 15-30 ppt. Their spatial distribution within a bay or estuary is seasonally variable. Longfin smelt may also make daily migrations; remaining deep during the day and rising to the surface at night.	A	Presumed Absent: The BSA does not contain estuarine habitats. There are no recent occurrences of the species above Rio Vista on the Sacramento River from CNDDDB search. The species is considered to be presumed absent of occurring within the BSA based on the absence of potentially suitable habitat and a low number of recent regional occurrences.
Sacramento splittail	<i>Pgonichthys macrolepidotus</i>	Fed: -- State: -- 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	A	Presumed Absent: The BSA is not located within the species known distribution with the Delta, Suisun Bay or associated marshes. There are no recent occurrences of the species above on the Sacramento River from CNDDDB search, nor does the irrigation canal have direct connection to the Cross Canal or Sacramento River. The species is considered to be presumed absent of occurring within the BSA due to the BSA being outside of the species

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
				activity and protective cover for young.		known range and lack of suitable habitat.
steelhead - Central Valley DPS	<i>Oncorhynchus mykiss</i>	Fed: State: CDFW:	T -- --	Spawning occurs in small tributaries on coarse gravel beds in riffle areas. Central Valley steelhead are found in the Sacramento River system; the principal remaining wild populations spawn annually in Deer and Mill Creeks in Tehama County, in the lower Yuba River, a small population in the lower Stanislaus River.	A	Presumed Absent: The BSA does not contain suitable habitat for anadromous fish, and the irrigation canal does not have direct connection to Cross Canal or the Sacramento River. The CNDDDB search illustrated occurrences of the species in the Sacramento and Feather Rivers approximately 2 miles west of the BSA. The species is considered to be absent from occurring within the BSA based on absence of potentially suitable habitat.
Invertebrate Species						
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	Fed: State: 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	Presumed Absent: The BSA does not contain vernal pool habitat necessary for the species. The nearest CNDDDB occurrence of the species is located approximately over 12 miles from the BSA. The species is considered to be presumed absent of occurring within the BSA based on the absence of potentially suitable habitat and distance from regional occurrences.
Valley Elderberry Longhorn beetle	<i>Desmocerus californicus dimorphus</i>	Fed: State: CDFW:	T -- --	Species requires elderberry shrubs 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. (Sea level-3,000 feet).	A	Presumed Absent: There are no elderberry shrubs located within the BSA. The nearest CNDDDB occurrence of the species is located approximately 2 miles from the BSA along the Sacramento River. The species is considered to be presumed absent of occurring within the BSA based on the absence of host elderberry shrub habitat.

Common Name	Species Name	Status	General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Vernal Pool fairy shrimp	<i>Branchinecta lynchi</i>	Fed: T State: -- CDFW: --	Species associated with smaller and shallower cool-water vernal pools approximately 6 inches deep and short periods of inundation. In the southernmost extremes of the range, the species occurs in large, deep cool-water pools. 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	Presumed Absent: The BSA does not contain vernal pool habitat necessary for the species. The nearest CNDDDB occurrence of the species is located approximately 4 miles from the BSA. The species is considered to be presumed absent of occurring within the BSA based on the absence of potentially suitable habitat and distance from regional occurrences.
Vernal Pool tadpole shrimp	<i>Lepidurus packardii</i>	Fed: E State: -- CDFW: --	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	Presumed Absent: The BSA does not contain vernal pool habitat necessary for the species. The nearest CNDDDB occurrence of the species is located approximately 4 miles from the BSA. The species is considered to be presumed absent of occurring within the BSA based on the absence of potentially suitable habitat and distance from regional occurrences.
Mammal Species					
Pallid bat	<i>Antrozous pallidus</i>	Fed: -- State: -- CDFW: SSC	Species occurs throughout California in all habitats except subalpine and alpine communities. Requires caves, mines tunnels, or buildings for day and night roosts. During the spring and summer males are solitary but females form small maternal colonies of usually less than 100 individuals. Each colony has a small home range and colonies are widely spaced, usually at least 10 miles apart. The species prefers to forage near mesic sites with large insect populations	A	Presumed Absent: The BSA does not contain suitable caves, mine tunnels, or building that the species may occupy or use as roosting habitat. The nearest CNDDDB occurrence of the species is located approximately 15 miles from the BSA. The species is considered absent due to the lack of suitable habitat and lack of regional occurrences.

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
				and preys on small moths, beetles, and other insects. In colder climates, hibernates through winter in small hibernacula. The species is extremely sensitive to human disturbance, especially of maternal colonies (CDFW 2000). Young born May - June.		
Western red bat	<i>Eumops perotis californicus</i>	Fed: -- State: -- CDFW: --	-- SSC	Inhabits many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Prefers open, rugged, rocky areas where suitable crevices are available for day roosts. Roosts in cliff face crevices (usually granite or consolidated sandstone), high buildings, trees and tunnels. Roosting sites must have a minimum 10 foot vertical drop. Births early April through August or September (sea level - 8,475 feet).	A	Presumed Absent: The BSA lacks suitable roosting habitat. There are no rugged, rocky areas or other potential roosting sites that met the minimum 10 foot vertical drop this species requires. The nearest CNDDDB occurrence of the species is located approximately 4 miles from the BSA and was recorded in 1996. The species is considered to be presumed absent of occurring within the BSA based on the absence of potentially suitable roosting habitat and a low number of recent regional occurrences.
Reptile Species						
giant garter snake	<i>Thamnophis gigas</i>	Fed: -- State: -- CDFW: --	T T --	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), emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat and mammal burrows estivation. Requires grassy	HP	High Potential: Rice fields, irrigation channels, cattails, grassy banks and open watersides areas are present within the BSA. Additionally, the BSA provides adjacent uplands, varied topography and mammal estivation sites. The giant garter snake was not observed during field surveys. The nearest CNDDDB occurrence of the species is located within the BSA miles and was recorded during 2016 surveys for Natomas Basin Conservancy - 56 CAPTURED, 42 RECAPTURED. The species is considered to have a high potential of occurring within the BSA

Common Name	Species Name	Status		General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
				banks and openings in waterside vegetation for basking and higher elevation uplands for cover and refuge from flood waters during winter dormant season.		based on presence of suitable habitat and confirmed use of the irrigation canal and Cross Canal.
western pond turtle	<i>Emys marmorata</i>	Fed: State: CDFW:	-- -- SSC	A fully aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Requires basking sites and suitable (sandy banks or grassy open field) upland habitat for reproduction (up to 4,690 feet).	HP	Low to Moderate Potential: Irrigation ditches with aquatic vegetation and suitable basking sites are present within the BSA. The western pond turtle was not observed during 2020 field surveys. The nearest CNDDDB occurrence of the species is located approximately 5 miles from the BSA. The species is considered to have a low to moderate potential of occurring within the BSA based on presence of potentially suitable habitat and the proximity of recent regional occurrences to the BSA.
Plant Species						
Boggs Lake hedge-hyssop	<i>Gratiola heterosepala</i>	Fed: State: CNPS:	-- -- 1B.2	An annual herb inhabiting clay soils and shallow waters of marshes, swamps, lake margins, and vernal pools. Flowers April-August (30-7,800 feet).	A	Presumed Absent: The BSA does not contain suitable swallow waters, marshes, swamps or vernal pools. The nearest CNDDDB occurrence of the species is more than 11 miles from the BSA. Due to the lack of suitable habitat and recent CNDDDB regional occurrences, the species is presumed absent from the BSA.
Dwarf downingia	<i>Downingia pusilla</i>	Fed: State: 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	Presumed Absent: The BSA does not contain vernal pool habitat required by the species. The nearest CNDDDB occurrence of the species is more than 11 miles from the BSA. Due to the lack of suitable habitat and recent CNDDDB regional occurrences, the species is presumed absent from the BSA.

Common Name	Species Name	Status	General Habitat Description	Habitat Present	Potential for Occurrence and Rationale
Sanford's arrowhead	<i>Sagittaria sanfordii</i>	Fed: -- State: -- CNPS: 1B.2	An aquatic, perennial rhizomatous herb inhabiting freshwater marshes, swamps, ponds, slow flowing streams or sloughs and ditches. The Sanford's Arrowhead almost always occurs under natural wetland conditions (USFW 1997). Many occurrences previously noted in the Central Valley and in southern California have been extirpated as the species' aquatic habitat has been lost to human activity (CNPS 2017). Flowers May-October (0-2,132 feet).	A	Presumed Absent: The BSA does contain potentially suitable aquatic habitat for the species; however, the irrigation canal is routinely maintained and no individuals were identified during the spring 2020 biological surveys. The nearest CNDDDB occurrence of the species is located approximately over 13 miles from the BSA. The species is considered to absent from occurring within the BSA based on disturbance and maintenance activities and the low number of recent regional occurrences.
Suisun marsh aster	<i>Symphyotrichum lentum</i>	Fed: -- State: -- CNPS: 1B.1	An annual herb inhabiting vernal pools, often within gravelly soils. Flowers May-October (115-5,774 feet).	A	Presumed Absent: Gravelly soils and vernal pool habitat is absent within the BSA. The nearest CNDDDB occurrence of the species is located approximately 4.5 miles from the BSA and was recorded in 2018. The species is considered to be presumed absent of occurring within the BSA based on the absence of potentially suitable habitat and a low number of recent regional occurrences.
woolly rose-mallow	<i>Hibiscus lasiocarpus var. occidentalis</i>	Fed: -- State: -- CNPS: 1B.2	A perennial rhizomatous herb inhabiting freshwater wetlands, wet banks, and marshes. Flowers June-September (0-394 feet).	HP	Low to Moderate Potential: The BSA does contain potentially suitable wet banks within the irrigation canal and Cross Canal. The nearest CNDDDB occurrence of the species is located approximately 5 miles northeast of the BSA within Cross Canal recorded in 2015. The species is considered to have a low potential of occurring within the BSA based on presence of potentially suitable habitat, and the moderate number of regional occurrences.

Appendix C: FEMA Firmette Maps

Appendix D: **Mitigation Monitoring and Reporting Program**

Appendix E: Response to Comments
