Omochumne-Hartnell Water District:

Groundwater Recharge Project

~~Draft~~ Final Initial Study/Mitigated Negative Declaration

~~July~~ September 2018

Prepared for:
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Omochumne-Hartnell Water District

Prepared by Omochumne-Hartnell Water District with assistance from:

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Table of Contents

List of Figures

List of Tables

Acronyms and Abbreviations

AB 52	Assembly Bill 52
AB 170	Assembly Bill 170
AB 1807	Assembly Bill 1807
AB 2588	Assembly Bill 2588
AF	Acre-Feet
AFY	Acre-feet per year
AHERA	Asbestos Hazard Emergency Response Act
Air District	Sacramento Metropoltian Air Quality Management District
APE	Area of Potential Effect
APN	Assessor's Parcel Number
ARB	Air Resources Board
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CAL/EPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCAA	California Clean Air Act
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH_4	Methane
CNDDB	California Natural Diversity Database
CO	Carbon Monoxide
CO_2	Cardon Dioxide
CO_2e	Carbon Dioxide-Equivalent
County	Sacramento County
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
DOC	California Department of Conservation
DOD	Department of Defense
DPM	Diesel-Exhaust Particulate Matter
DTSC	Department of Toxic Substances Control

DWR ..... Department of Water Resources
EIR ..... Environmental Impact Report
EPA ..... U.S. Environmental Protection Agency
FCAA ..... Federal Clean Air Act
FEMA ..... Federal Emergency Management Agency
FIP ..... Federal Implementation Plan
FIRM ..... Flood Insurance Rate Map
FMMP ..... Farmland Mapping and Monitoring Program
GHG ..... Greenhouse Gases
gpm ..... Gallons per Minute
GWP ..... Global Warming Potential
HFCs ..... Hydrofluorocarbons
IS ..... Initial Study
MMRP ..... Mitigation Monitoring and Reporting Program
MND ..... Mitigated Negative Declaration
MRZ ..... Mineral Resource Zone
N_2O ..... Nitrous Oxide
NAAQS ..... National Ambient Air Quality Standards
NAHC ..... Native American Heritage Commission
NESHAP ..... National Emission Standards for Hazardous Air Pollutants
NFIP ..... National Flood Insurance Program
NGVD ..... National Geodetic Vertical Datum
NO_2 ..... Nitrogen Dioxide
NOAA ..... National Oceanic and Atmospheric Adminsitration
NPDES ..... National Pollutant Discharge Elimination System
NRHP ..... National Register of Historic Places
O_3 ..... Ozone
OHWD ..... Omochumne-Hartnell Water District
Pb ..... Lead
PFC ..... Perfluorocarbons
PM_{10} ..... Particulate Matter less than 10 Microns in Diameter
$PM_{2.5}$ ..... Particulate Matter less than 2.5 Microns in Diameter
PRC ..... Public Resources Code
PPM ..... Parts per Million

QSD ..... Qualified SWPPP Developer
ROG ..... Reactive Organic Gases
RWQCB ..... Regional Water Quality Control Board
SF_6 ..... Sulfur Hexafluoride
SHC ..... Streets & Highways Code
SIP ..... State Implementation Plan
SLIC ..... Spills-Leaks-Investigations-Cleanups
SMAQMD ..... Sacramento Metropolitan Air Quality Management District
SMARA ..... Surface Mining and Reclamation Act
SO_2 ..... Sulfur Dioxide
SVAB ..... Sacramento Valley Air Basin
SWPPP ..... Stormwater Pollution Prevention Plan
SWRCB ..... State Water Resources Control Board
TAC ..... Toxic Air Contaminants
TCR ..... Transportation Concept Report
TPY ..... Tons per Year
TSCA ..... Toxic Substances Control Act
USACE ..... United States Army Corps of Engineers
USFWS ..... United States Fish and Wildlife Service
UST ..... Underground Storage Tank
WDR ..... Waste Discharge Report

1 Introduction

Omochumne-Hartnell Water District (OHWD) has historically managed flows of the Cosumnes River to allow for water deliveries to landowners within its boundaries. Historically, the District also provided supplemental Central Valley Project (CVP) water to benefit agriculture within the District and adjacent to the Cosumnes River and Deer Creek.[1] In recent years, the number of riparian diverters has decreased.[2] The Cosumnes River has had a physical connection to the groundwater basin. However, years of groundwater pumping have lowered groundwater levels.

The California Department of Water Resources (DWR) has awarded funding to the OHWD to construct the proposed Groundwater Recharge Project (proposed Project) in the vicinity of the Cosumnes River in southeast Sacramento County, CA. Over a 10-year period, the proposed Project will use two existing diversion points on the Cosumnes River to flood dormant agricultural fields in the off-irrigation season between the months of November and March when streamflow is high and excess water is available. The proposed Project will divert a minimum of approximately 4,000 acre-feet per year (AFY) of water in 'normal' years to recharge the groundwater aquifer. The system will be designed to divert and recharge up to 6,000 AFY during 'wet' periods when sufficient diversion water is available in the river, using two existing pump houses and pipelines, and installation of two additional pump houses and a conveyance system. A complete Project Description with details of the proposed Project's location, construction, operation, maintenance and system information are provided in Chapter 2.

Provost & Pritchard Consulting Group (Provost & Pritchard) has prepared this Initial Study/Mitigated Negative Declaration (IS/MND) on behalf of the applicant, OHWD (or District), to evaluate the potential environmental effects of constructing approximately four new monitoring wells, two additional pumphouses, and associated conveyance system and use of existing water conveyance infrastructure as part of the proposed Project). This document has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code Section 21000, *et seq.* The District is the CEQA lead agency for this proposed Project.

The site and the proposed Project are described in detail in **Chapter 2, Project Description**.

1.1 CEQA Process

An Initial Study (IS) is a document prepared by a lead agency to determine whether a project may have a significant effect on the environment. Section 15064 (a)(1) of the CEQA Guidelines (California Code of Regulations Title 14, Section 15000, *et seq.*) provides that an environmental impact report (EIR) must be prepared if there is substantial evidence in light of the whole record that the proposed Project under review may have a significant effect on the environment and should be further analyzed to determine mitigation measures or project alternatives that might avoid or reduce project impacts to less than significant levels. A negative declaration may be prepared instead if the lead agency finds that there is *no* substantial evidence in light of the whole record that the project may have a significant effect on the environment. A negative declaration is a written statement describing the reasons why a proposed Project, not otherwise exempt from CEQA, would not have a significant effect on the environment and, therefore, why it would not require the

[1] Omochumne Hartnell Water District. http://www.ohwd.org/index.html. Accessed March 2018.
[2] The Southeast Sacramento County Agricultural Water Authority. http://www.sscawa.org/sscawa/omo_dist.cfm. Accessed March 2018.

preparation of an EIR (CEQA Guidelines Section 15371). According to CEQA Guidelines Section 15070, a negative declaration shall be prepared for a project subject to CEQA when either:

a. The IS shows there is no substantial evidence, in light of the whole record before the agency, that the proposed Project may have a significant effect on the environment, or

b. The IS identified potentially significant effects, but:

    1. Revisions in the project plans or proposals made by or agreed to by the applicant before the proposed negative declaration and initial study is released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur is prepared, and

    2. There is no substantial evidence, in light of the whole record before the agency, that the proposed Project *as revised* may have a significant effect on the environment. If revisions are adopted by the Lead Agency into the proposed Project in accordance with the CEQA Guidelines Section 15070(b), a *Mitigated Negative Declaration* (MND) is prepared.

1.2 Document Format

This IS/MND contains four chapters and four technical appendices. Chapter 1, Introduction, provides an overview of the proposed Project and the CEQA process. Chapter 2, Project Description, provides a detailed description of proposed Project components and objectives. Chapter 3, Impact Analysis, presents the CEQA checklist and environmental analysis for all impact areas, mandatory findings of significance, and feasible mitigation measures. If the proposed Project does not have the potential to significantly impact a given issue area, the relevant section provides a brief discussion of the reasons why no impacts are expected. If the proposed Project could have a potentially significant impact on a resource, the issue area discussion provides a description of potential impacts, and appropriate mitigation measures and/or permit requirements that would reduce those impacts to a less than significant level. **Chapter 4 Mitigation Monitoring and Reporting Program (MMRP)**, provides the proposed mitigation measures, implementation timelines, and the entity/agency responsible for ensuring implementation.

The CalEEMod Output Files, Biological Evaluation, Cultural Resources Information, and AB 52 Correspondence are provided as technical appendices A, B, C and D at the end of this document.

Environmental impacts are separated into the following categories:

Potentially Significant Impact. This category is applicable if there is substantial evidence that an effect may be significant, and no feasible mitigation measures can be identified to reduce impacts to a less than significant level. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

Less than Significant with Mitigation Incorporated. This category applies where the incorporation of mitigation measures would reduce an effect from a "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measure(s), and briefly explain how they would reduce the effect to a less than significant level (mitigation measures from earlier analyses may be cross-referenced).

Less Than Significant Impact. This category is identified when the proposed Project would result in impacts below the threshold of significance, and no mitigation measures are required.

No Impact. This category applies when a project would not create an impact in the specific environmental issue area. "No Impact" answers do not require a detailed explanation if they are adequately supported by the information sources cited by the lead agency, which show that the impact does not apply to the specific project (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis.)

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2 Project Description

2.1 Project Background and Objectives

2.1.1 Project Title

Omochumne-Hartnell Water District Groundwater Recharge Project

2.1.2 Lead Agency Name and Address

Lead Agency Contact
Omochumne-Hartnell Water District
7513 Sloughhouse Road
PO Box 211
Wilton, CA 95693-0211

2.1.3 Contact Person and Phone Number

Lead Agency Contact
Omochumne-Hartnell Water District
Michael Wackman, General Manager
(916) 682-5958

CEQA Consultant
Provost & Pritchard Consulting Group
Dawn E. Marple, Project Manager
(559) 636-1166

2.1.4 Project Owner/Operator

Omochumne-Hartnell Water District
Michael Wackman, General Manager
(916) 682-5958

2.1.5 Project Location

The Project is located in central Sacramento County, central California (**Figure 2-1**). The Project site is located south of Route 16 and directly west of the Cosumnes River. The Project consists of three candidate fields that compose two independently-operating project areas (**Figure 2-1**). All three candidate sites lie between Deer Creek and the Cosumnes River, near the Folsom South Canal of Wilton, CA.

Field Site 1 – Teichert Ranch
A 785-acre property is currently cultivated with grape vines; vine rows run northeast to southwest, roughly parallel to the river.

Field Site 2 – Rooney Ranch
A 376-acre property currently cultivated with grapevines; vine rows run northeast to southwest, roughly parallel to the river.

Field Site 3 – Mosher Property
An 89-acre property located adjacent to and immediately south of Rooney Ranch is currently used to grow winter row crops, namely oats.

2.1.6 Latitude and Longitude

The three Project Field Sites are located at
Teichert Ranch: 38.44527, -121.23833
Rooney Ranch: 38.48077, -121.20333
Mosher Property: 38.47173, -121.20722

2.1.7 General Plan Designation

Agricultural Cropland

2.1.8 Zoning

See **Figure 3-6** Zoning Map.
AG-40 Agricultural minimum parcel size of 40 gross acres.
AG-80 Agricultural minimum parcel size of 80 gross acres.

2.1.9 Surrounding Land Uses and Setting

The proposed Project site is located in the middle of Sacramento County (County), south of the Sacramento San Joaquin Delta. The proposed Project is located east of the City of Elk Grove within the jurisdiction of the County of Sacramento. The 2010 census revealed the County's population was 1,418,788, with approximately 552,852 housing units. The County encompasses 965.65 acres, with 1,469.3 persons per square mile, as of 2010[3]. The land within the immediate vicinity of the proposed Project is used as agricultural, rural residential and natural preserve, along the Cosumnes River and Deer Creek.

2.2 Project Background & Purpose

Omochumne-Hartnell Water District has historically purchased and managed diversion water from the Central Valley Project for the benefit of District agricultural users adjacent to the Cosumnes River and Deer Creek. In recent years, however, the number of riparian diverters has decreased. As a result, three flashboard dams that historically supported diversions are now maintained and operated by the District to increase the wetted perimeter of the river to affect greater groundwater recharge[4].

[3] Sacramento County General Plan. Executive Summary. 2005.Page 5. http://www.per.saccounty.net/PlansandProjectsIn-Progress/Documents/General%20Plan%202030/2030%20General%20Plan%20Exec%20Summary.pdf Date Accessed: 11/20/2017
[4] Omochumne-Hartnell Water District. Southeast Sacramento County Agricultural Water Authority. 2017. http://www.sscawa.org/sscawa/omo_dist.cfm Date Accessed 11/20/2017

Historically, the Cosumnes River has had a physical connection to the groundwater basin, which helped improve the flow within the river for fish migration, among additional beneficial uses.[5] However, years of groundwater pumping have lowered groundwater levels.

OHWD operates three removable dams along the Cosumnes River. These dams are used to hold water in the river during the late spring time to help recharge the ground water and allow some onstream users to pump riparian water rights from the river.

These dams are constructed to be temporary and are removed during the winter and times when fish migration may occur. Several of the dams have fish ladder to allow the fish to migrate pass the dams and provide safe passage for the fish during the crucial times of the year.

The Project is intended to increase groundwater recharge adjacent to and under the Cosumnes River, allowing the groundwater level to be raised to historic levels that will reconnect with, and thereby allow, the Cosumnes River to run for longer periods during the spring and summer and begin flowing earlier in the fall. The Project will use two existing diversion points on the Cosumnes River to flood dormant agricultural fields between the months of November and March when streamflow is high, excess water is available, and irrigation is not needed.

By increasing water levels in the ~~Cosumnes River Basin~~ South American Groundwater Subbasin, OHWD reduces the pumping cost for their customers. The higher the water level, the less energy it takes to pump the groundwater and the more efficient the District's pumps become. Instead of building new pipelines or canals to deliver surface water, the District will be utilizing the groundwater basin to transport and store water.

Funding for the proposed Project has been awarded through the Department of Water Resources (DWR).

2.3 Description of the Proposed Project

Phase 1

In Phase 1 the Project will utilize two existing diversion points along the Cosumnes River to flood the adjacent dormant agricultural fields in the off-irrigation season between the months of November and March when streamflow is high and excess water is available. Phase 1 of the Project will allow only a portion of the ultimate diversion to occur as it will rely on the existing infrastructure. A future phase (described below) will allow the full diversion to occur, as it will rely on the existing infrastructure for the diversion of the water from the River. Water conveyance pipes will be sized for the ultimate diversion flow, however, installation of the pumps to provide the full diversion flow will be installed in future phases.

The proposed Project aims to divert a minimum of approximately 4,000 AF of water per year to recharge the groundwater aquifer, and the pump and conveyance system will be designed to divert and recharge up to 6,000 AF per year during wet periods when sufficient water is available in the river.

The Project would ultimately divert up to 50 cfs from the Cosumnes River to three adjacent Field Sites over a minimum 60-day period to achieve 6,000 AF per year during wet years. In years when the water in the river is not available, no diversion will occur. The river flow is dependent on the specific meteorological conditions for a given water year. To divert water, there would be minimum flow requirements in the river and allowable diversion amounts based on the amount of flow in the river. A statistical analysis of Cosumnes River water flows from 1908 to 2016 water years was completed by the District in conjunction with University of California, Davis to estimate diversion potential. The availability of water in the river to divert 50 cfs to the

[5] Omochumne-Hartnell Water District Groundwater Recharge Project. http://ohwd.org/projects.html Date Accessed 11/20/2017.

adjacent fields over a minimum of 60 days historically occurs approximately fifty percent of the years. In dryer water years, there are fewer days with sufficient flow in the river to allow the diversion of 50 cfs and less than 6,000 AF would be diverted over the season. The diverted water will require conveyance around each property to efficiently flood the fields evenly for effective infiltration.

Water for diversion would be obtained through a permit for the diversion of excess flows issued by the State Water Resources Control Board, and subject to that entity's requirement that (1) unappropriated water is available to supply the permit applicant, and (2) the applicant's appropriation is in the public interest.

A description of the existing conditions and proposed components at each candidate site is as follows:

Field Site 1 – Teichert Ranch (Kautz Property 1)
Teichert Ranch is an approximately 792-acre parcel. It is currently planted with grape vines. A drip system is currently used to irrigate the grape vines. In Phase 1 the existing pump system will continue to divert river flows at 5,000 gpm. No additional gate valves or other distribution components are necessary along the conveyance system.

New PVC underground pipes, approximately 9,300 feet in length, will be installed parallel to the irrigation pipeline along the south edge of the property with mainline shut off valve to isolate the existing irrigation pump from the future pump for conveyance of recharge water. Four 18-inch overflow valves are to be installed along the conveyance system at each roadway to supply water to the southeast end of the recharge field; water will gravity-flow across the natural NW aspect of field.

Field Site 2 – Rooney Ranch (Kautz Property 2)
Rooney Ranch is an approximately 376-acre parcel. It is currently planted with grape vines. There is an existing drip irrigation system used to irrigate the grape vines. An existing river diversion with 12-inch pipe through the levee and a non-operational pump system is located at the site and will be rehabilitated. New PVC pipe sized to convey the ultimate future capacity of 8,350 cfs, 5,883 feet in length, will be installed along the south edge of the property. A new variable speed pump capable of supplying 3,465 gpm to the fields is required for Project implementation and will be included in Phase-1 of Project construction. The conveyance of water from the pump along the levee edge of the field will be sized for the ultimate future capacity of 8,350 gpm. The conveyance system will be extended to the southern property boundary to provide water to the Mosher Property. Two 18-inch valves will be installed along the conveyance system in line with existing access roads to allow connection of poly-pipe or gated pipe. Additionally, a valve structure is required at the southern end of the property to provide water to the Mosher property. No gate valves or other distribution components are necessary along the conveyance system.

Field Site 3 – Mosher Property
The Mosher Property is approximately 89 acres and is currently fallow land. Within the past decade, the topsoil was mined. Subsequently, during large rain events, the land floods and high infiltration rates have been observed. As a result of the top soil mining, the property sits at a low elevation relative to surrounding land. The water diverted at Rooney Ranch will be used to irrigate this property. One 18-inch overflow valve will be installed at the south-east corner to supply water to the end of the field and water will be supplied from the same centrifugal pump and electrical service as is in Site 2 (Rooney Ranch).

Phase 2
All goals and objectives achieved in Phase 1 will continue in Phase 2; however, the existing pump at Teichert Ranch (Field Site 1) would be upgraded, or a new pump would be installed at Rooney and Teichert to allow for an ultimate capacity diversion of 14,000 gpm (**Figure 2-3**).

2.4 Project Construction, Operation and Maintenance

2.4.1 Construction Details

The proposed Project will be using existing water diversion infrastructure and all construction activities will be limited to installation of the future pumps and conveyance systems. Construction will require temporary staging and storage areas for materials and equipment. Materials staging, and storage will be located within the analyzed Project area.

Only non-hazardous waste will be generated during construction. The following wastes are anticipated: vegetative debris from site clearing, common paper/plastic and food trash, cardboard, wood pallets, copper wire, scrap metal, and wooden wire spools, most of which will be recycled. Although construction is not expected to generate hazardous waste, field equipment used during construction has the potential to contain various hazardous materials such as diesel fuel, hydraulic oil, grease, solvents, adhesives, paints, and other petroleum-based products. Contractors are required to handle accidental releases and disposal of these types of fluids in compliance with applicable laws and regulations.

2.4.2 Operating System Characteristics

Existing infrastructure and an added diversion pipeline will be used to divert the Cosumnes River water.

2.4.3 Operation and Maintenance

The proposed Project will require regular operation personnel to authorize diversion. All maintenance will occur on an as-needed basis.

2.4.4 Other Public Agencies Whose Approval or Permit May Be Required:

- State Water Resources Control Board, Central Valley Regional Water Quality Control Board (Region 5), Department of Water Resources – Temporary Stormwater Diversion Permit; Standard Permit
- Reclamation District 800 (Flood Protection) – Encroachment Permit
- Sacramento Metropolitan Air Quality Management District
- California Department of Fish and Wildlife
- Central Valley Flood Protection Board
- U.S. Army Corps of Engineers

2.4.5 Consultation with California Native American Tribes

Public Resources Code Section 21080.3.1, *et seq.*), requires that a lead agency, within 14 days of determining that an application is complete, must notify any Native American Tribe that has previously requested such notification about the project and inquire whether the Tribe wishes to initiate formal consultation. Tribes have 30 days from receipt of notification to request formal consultation. The lead agency then has 30 days to initiate the consultation, which then continues until the parties come to an agreement regarding necessary mitigation or agree that no mitigation is needed, or one or both parties determine that negotiation occurred in good faith, but no agreement will be made.

Omochumne-Hartnell Water District previously received an email from the Wilton Rancheria Tribe in response to a Formal Notification of proposed Projects request. Pursuant to Public Resources Code Section 21080.3.1 Omochumne-Hartnell Water District sent a letter December 18, 2017 to the Wilton Rancheria Tribe describing the project and requesting if formal consultation is appropriate. On December 20, the Wilton Rancheria Tribe provided email correspondences requesting consultation.

All Tribal correspondence is included within **Appendix C, Tribal Consultation,** of this initial study.

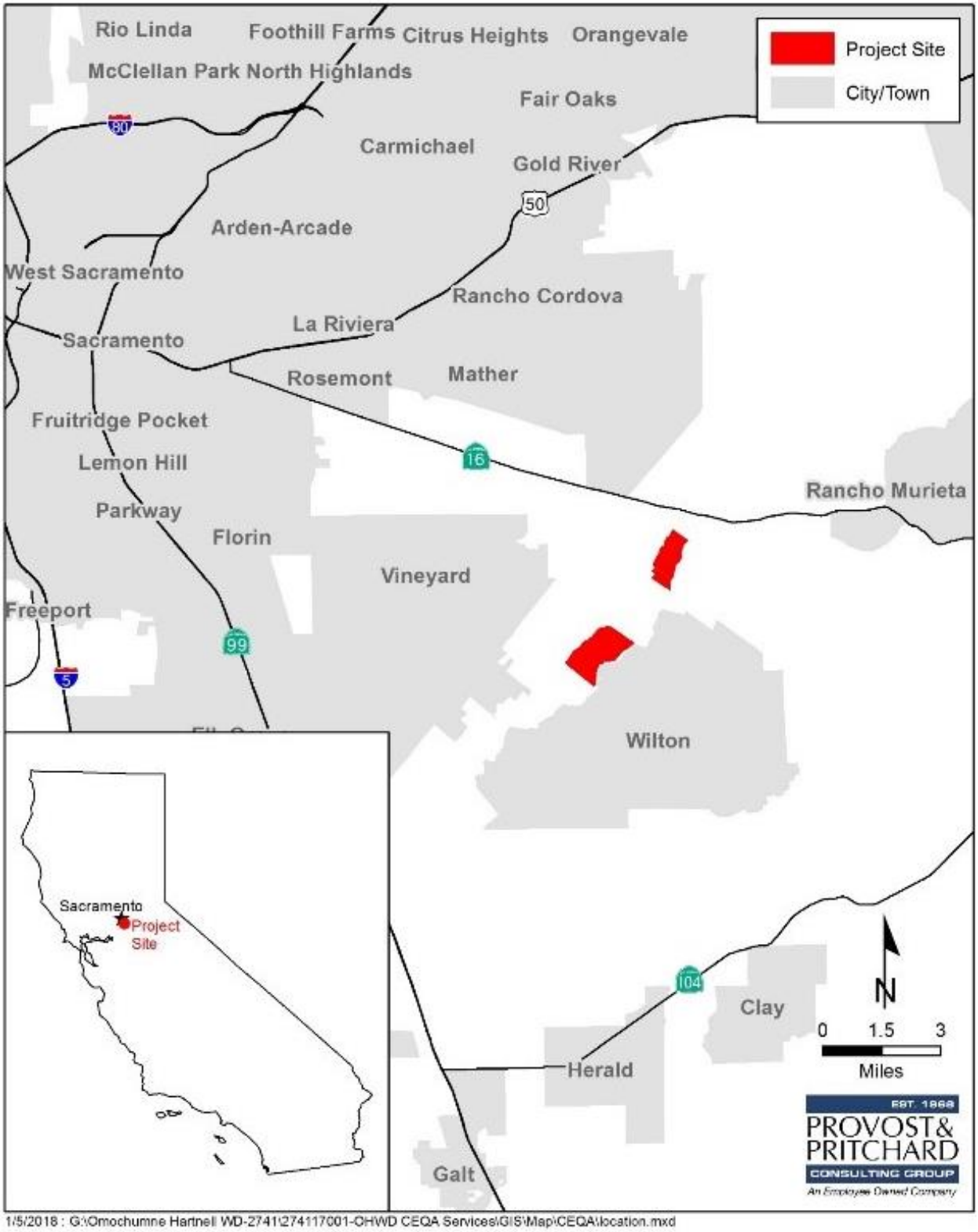

Figure 2-1. Regional Location Map

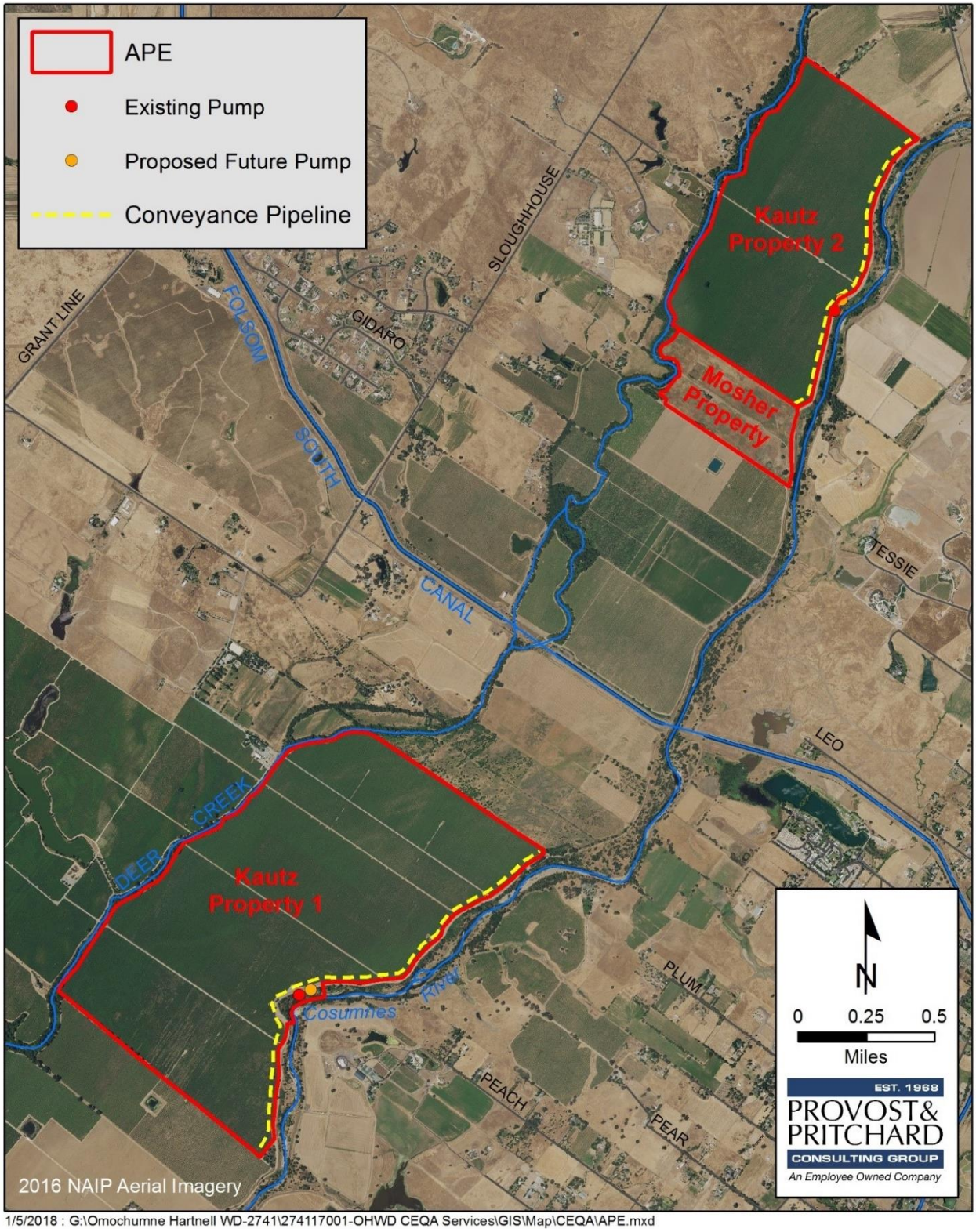

Figure 2-2. Aerial/Area of Potential Effect

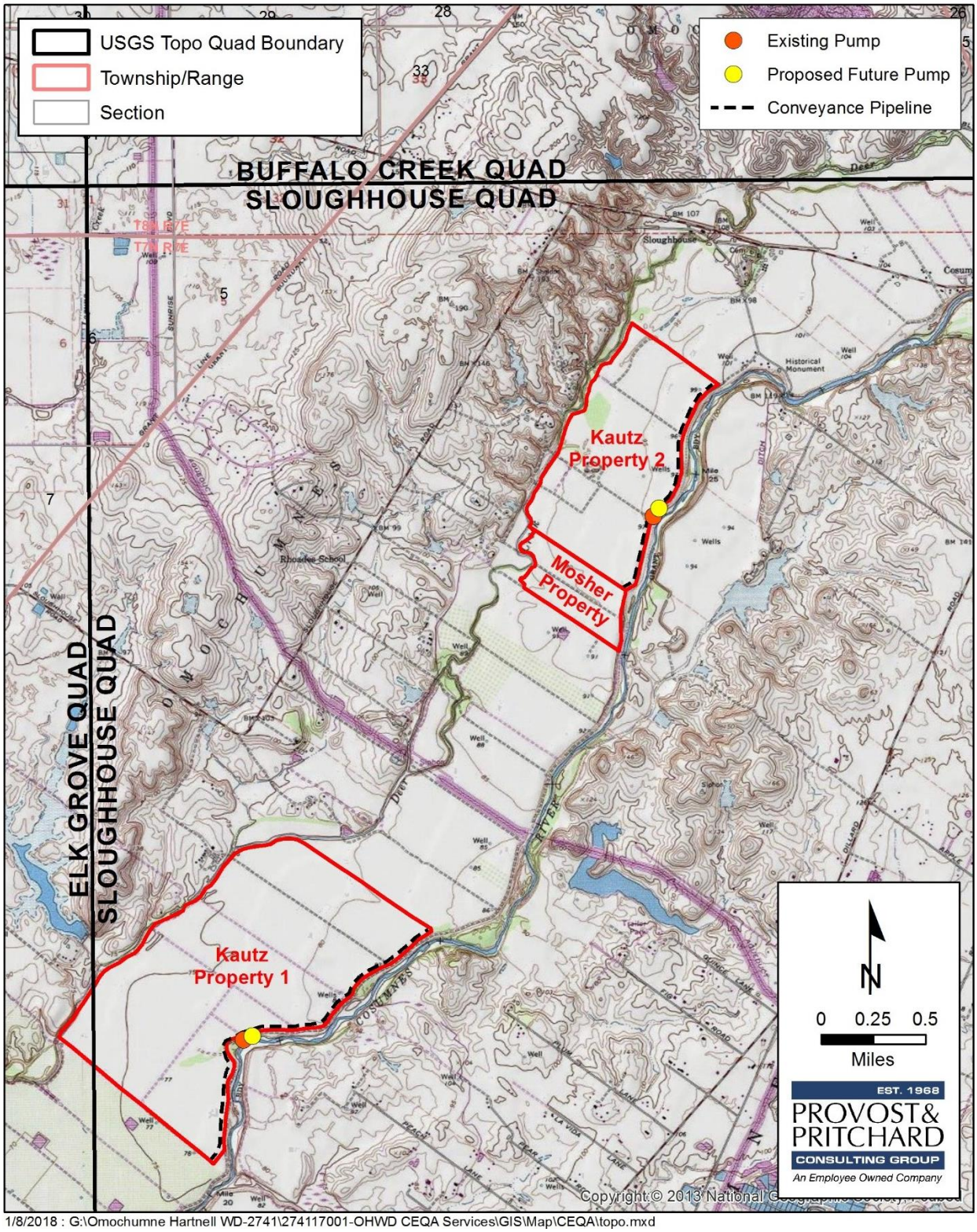

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Figure 2-3. Topographic Quadrangle Map

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Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, as indicated by the checklist and subsequent discussion on the following pages.

☒ Aesthetics	☒ Agriculture Resources	☒ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology/Soils
☒ Greenhouse Gas Emissions	☒ Hazards & Hazardous Materials	☒ Hydrology/Water Quality
☒ Land Use/Planning	☐ Mineral Resources	☒ Noise
☒ Population/Housing	☐ Public Services	☐ Recreation
☒ Transportation/Traffic	☒ Tribal Cultural Resources	☐ Utilities/Service Systems
☒ Mandatory Findings of significance		

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____

Signature Date

_____

Printed Name/Position

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3 Impact Analysis

3.1 Aesthetics

Table 3-1. Aesthetics Issues

Aesthetics				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

3.1.1 Environmental Setting

The proposed Project is located in the central portion of unincorporated Sacramento County. Lands in the Project vicinity consist of relatively flat, irrigated farmland, riparian zones and rural residential. Local agricultural practices consist of row crop, field crop and orchard cultivation. State Highway 160 within the County and west of the proposed Project has been designated as a State Scenic Highway; however, the segment that is designated is over 14 miles away (**Figure 3-1**).

3.1.2 Regulatory Setting

3.1.2.1 Federal

There are no federal laws or regulations regarding aesthetics that apply to the proposed Project.

3.1.2.2 State

California's Scenic Highway Program was created by the Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. The State laws governing the Scenic Highway Program are found in the Streets and Highway Code (SHC) Section 260, et seq. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These

highways are identified in SCH Section 263. A list of California's scenic highways and map showing their locations may be obtained from Caltrans' Scenic Highway Coordinators.[6]

3.1.2.3 Local

2030 Sacramento County General Plan: The Sacramento County General Plan sets forth goals and policies that protect the aesthetic character of the County. However, none of the goals and policies is applicable to the aesthetics of the proposed Project.

3.1.3 Impact Assessment

Would the project:

3.1.3.1 I-a) Have a substantial adverse effect on a scenic vista?

a) Less Than Significant Impact. Scenic features in this portion of the County may include the American River, Sacramento River, Cosumnes River and even the vast expanse of agricultural uses. The Project site is within the viewshed of the Cosumnes River; however, no structures that could block the viewshed are associated with the Project. Impacts are less than significant.

3.1.3.2 I-b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

b) Less Than Significant Impact. There are no designated State Scenic Highways located on or in the immediate vicinity of the proposed Project site, as depicted in **Figure 3-1. Scenic Highway Legend**. The proposed Project is located in mid-Sacramento County (Figure 2-1 Regional Location Map. Project activities do not have the potential to affect this segment. [7]

[6] Caltrans Scenic Highway Corridors map. http://www.dot.ca.gov/dist3/departments/mtce/scenic.htm

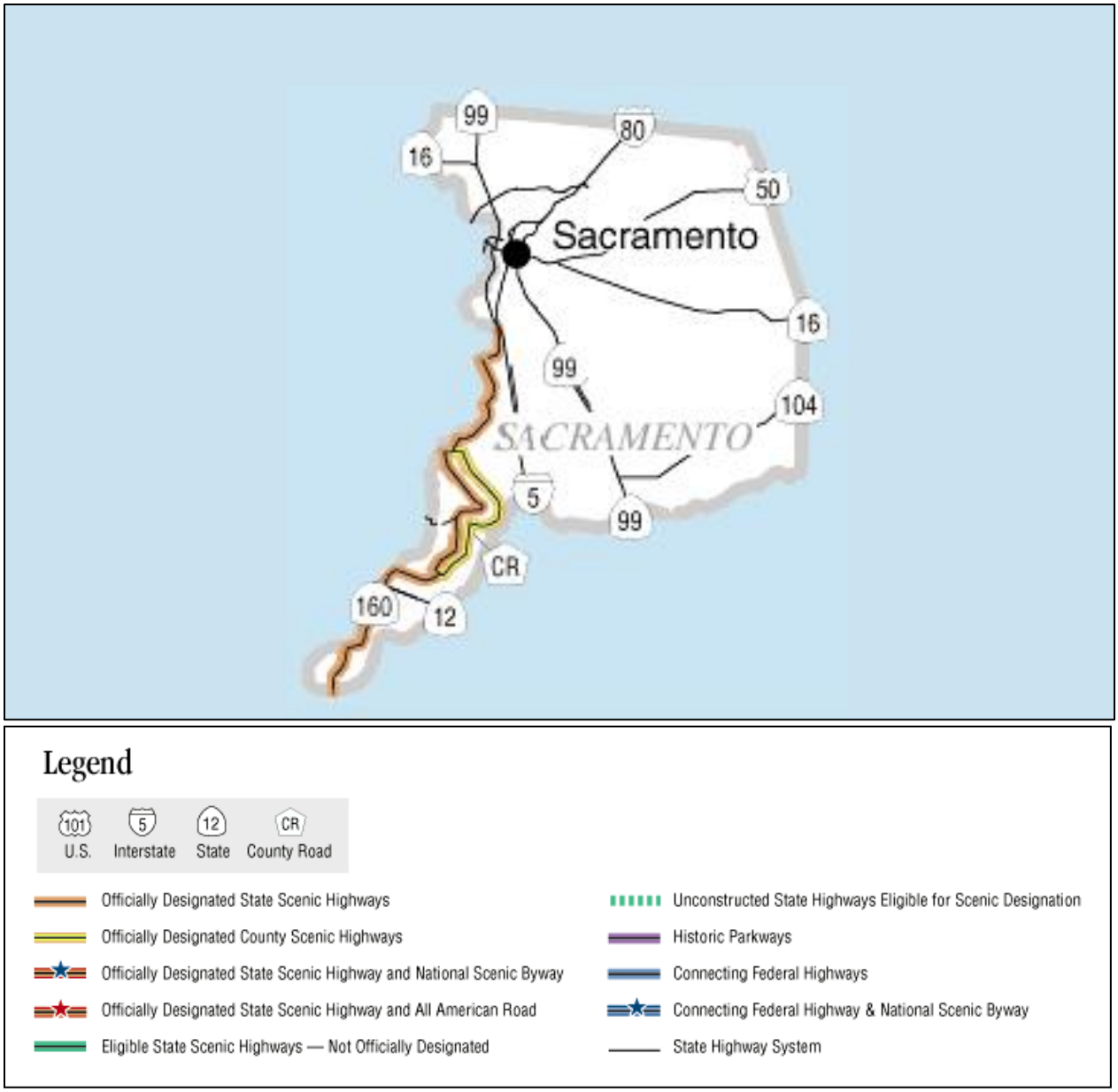

Figure 3-1. Scenic Highway Legend

3.1.3.3 I c) Substantially degrade the existing visual character or quality of the site and its surroundings?

c) Less Than Significant Impact. The proposed Project site contains agricultural and rural infrastructure and is located amid land zoned and utilized for agriculture, including ancillary tail water and water regulating basins. The new basin and facilities will blend in with existing uses and the Project will not substantially degrade the visual character of the area. The impact will be less than significant.

3.1.3.4 I-d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

d) Less Than Significant Impact. The proposed Project area is primarily agriculture, other rural uses. The proposed Project will not degrade the visual character of the area. There is no artificial lighting proposed to be at the basin site. There would be no significant additional vehicular traffic to the site after construction except as-needed maintenance trips. Therefore, the Project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area or be inconsistent with existing conditions.

3.2 Agriculture and Forestry Resources

Table 3-2. Agriculture and Forest Resources

Agriculture and Forest Resources				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.2.1 Environmental Setting

"Agricultural production in Sacramento County remains a significant contributor to the local economy. In addition to the almost $300 million in annual production value, there are hundreds of jobs directly tied to that production and thousands more that are impacted indirectly in the production, processing, transportation, and marketing of those commodities. It is estimated that there is approximately a four to one economic multiplier effect from crops grown in this region, so $300 million in production value is actually a $1.2 billion impact on the local economy. Other benefits of agriculture include quality of life, open space contribution and management of habitat for wildlife.[8]"

The California Department of Conservation's 2012 Farmland Mapping and Monitoring Program (FMMP) is a non-regulatory program that produces "Important Farmland" maps and statistical data used for analyzing conversion of California's agricultural resources to urban and non-agricultural uses. The Important Farmland maps identify eight land use categories, five of which are agriculture related: prime farmland, farmland of

[8] Agricultural Element. Sacramento County General Plan 2017 Amendment. 2017. Page 1.

statewide importance, unique farmland, farmland of local importance, and grazing land – rated according to soil quality and irrigation status. Each is summarized below[9]:

• PRIME FARMLAND (P): Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

• FARMLAND OF STATEWIDE IMPORTANCE (S): Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture.

Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

• UNIQUE FARMLAND (U): Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include non- irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

• FARMLAND OF LOCAL IMPORTANCE (L): Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

• GRAZING LAND (G): Land on which the existing vegetation is suited to the grazing of livestock. The minimum mapping unit for Grazing Land is 40 acres.

• URBAN AND BUILT-UP LAND (D): Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

• OTHER LAND (X): Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

• WATER (W): Perennial water bodies with an extent of at least 40 acres.

The state of California Department of Conservation 2012 FMMP for Sacramento County designates the site and surrounding areas as Prime Farmland and Farmland of Local Importance, as shown in Figure 3-2 Farmlands Map.

[9] California Department of Conservation. FMMP – Report and Statistics. http://www.conservation.ca.gov/dlrp/fmmp/products/Pages/ReportsStatistics.aspx. Accessed 12 June 2017.

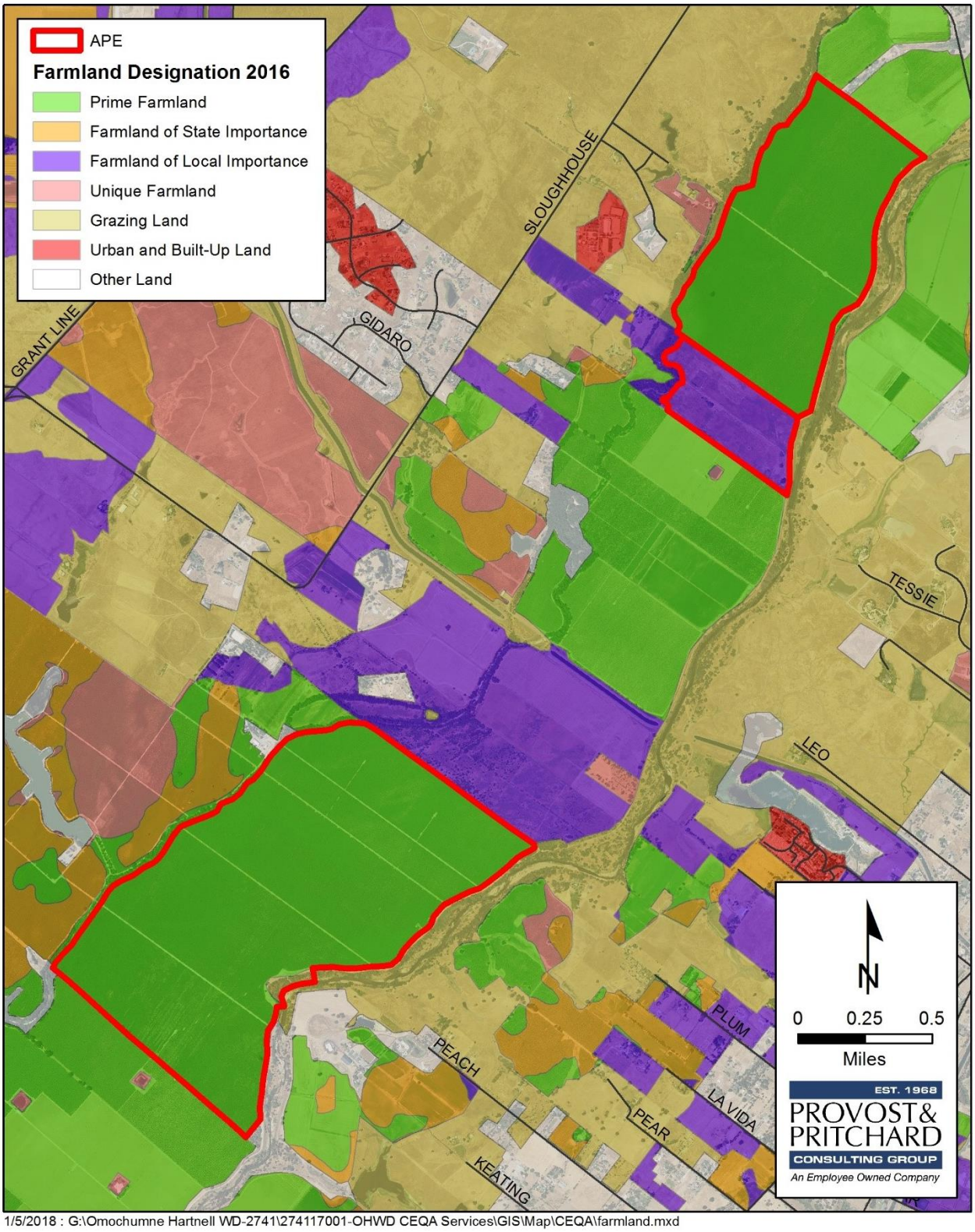

Figure 3-2. Farmlands Map.

3.2.2 Regulatory Setting

3.2.2.1 Federal

There are no federal laws or regulations regarding agricultural land that apply to the proposed Project.

3.2.2.2 State

The California Department of Conservation Farmland Conservancy Program seeks to encourage the long-term, private stewardship of agricultural lands through the voluntary use of agricultural conservation easements. The CFCP provides grant funding for easement and planning projects that support agricultural land conservation statewide.

Farmland Mapping and Monitoring Program produces maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status; the best quality land is called Prime Farmland. The maps are updated every two years with the use of a computer mapping system, aerial imagery, public review, and field reconnaissance

3.2.2.3 Local

Sacramento County 2030 General Plan: The Agriculture Element of Sacramento County's 2030 General Plan contains the following policies to support the goal of long-term preservation and protection of agricultural resources:

> *Policy AG-1*. The County shall protect prime, statewide importance, unique and local importance farmlands located outside of the USB from urban encroachment.
>
> *Policy AG-27*. The County shall actively encourage groundwater recharge, water conservation and water recycling by both agricultural and urban water users.

3.2.3 Impact Assessment

3.2.3.1 II-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?

a) Less Than Significant Impact. The proposed Project site is designated as Prime Farmland and Farmland of Local Importance. **See Figure 3-2. Farmlands Map.**. The proposed Project would allow for water recharge to occur when the exiting crops are dormant. By utilizing available surface water sources, the Project will assist in groundwater replenishment. Groundwater replenishment associated with the proposed Project is consistent with the goals of the Sustainable Groundwater Management Act (SGMA). Further, no existing farmland will be converted to non-agricultural uses due to the Project; therefore, the impact would be less than significant.

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

b) Less Than Significant Impact. A portion of the Project is located within a Williamson Act Preserve; (**see Figure 3-3. Williamson Act Map**). However, as the Project will utilize the land that existing crops are grown on for recharge while the crops are dormant there will not be any conversion of the existing agricultural land uses to non-agricultural land uses the impact would be less than significant.

3.2.3.3 II-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))?

c) No Impact. There is no timber land in the region; therefore, there will be no impact.

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

3.2.3.5 II-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?

d-e) No Impact. There is no forest or timberland located on or near the proposed Project site, nor is the site zoned for forest land or timberland. The proposed Project would not convert forest land to non-forest use or result in the conversion of farmland to non-agricultural uses. The proposed Project would have no impact.

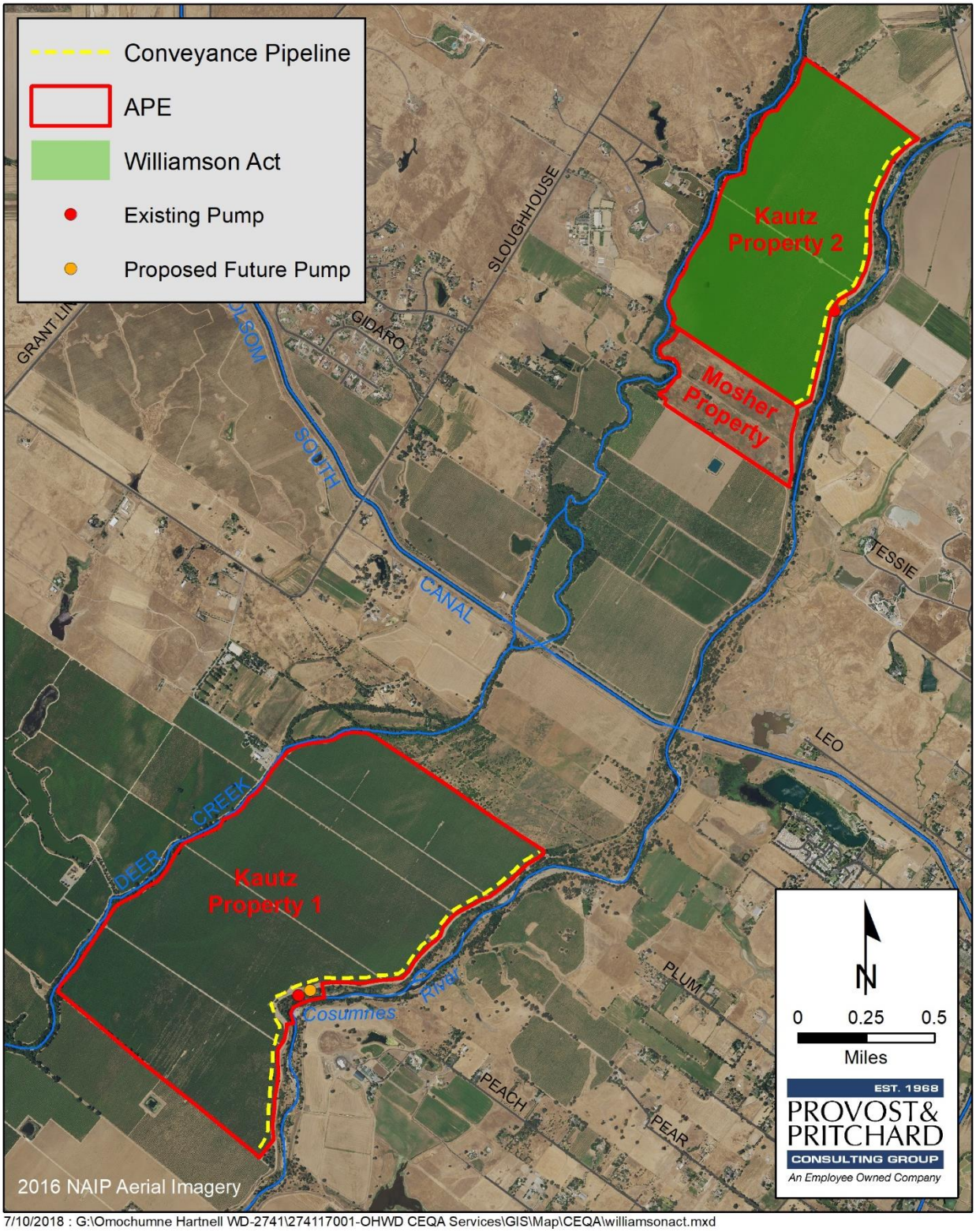

Figure 3-3. Williamson Act Map

3.3 Air Quality

Table 3-3. Air Quality

Air Quality					
Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c)	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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

3.3.1 Environmental Setting

The proposed Project lies within the eleven-county Sacramento Valley Air Basin (SVAB), which is managed by the Sacramento Metropolitan Air Quality Management District (SMAQMD). Air quality in the SVAB is influenced by a variety of factors, including topography, local and regional meteorology. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been established for the following criteria pollutants: carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). The CAAQS also set standards for sulfates, hydrogen sulfide, and visibility.

Air quality plans or attainment plans are used to bring the applicable air basin into attainment with all state and federal ambient air quality standards designed to protect the health and safety of residents within that air basin. Areas are classified under the Federal Clean Air Act as either "attainment", "non-attainment", or "extreme non-attainment" areas for each criteria pollutant based on whether the NAAQS have been achieved or not. Attainment relative to the State standards is determined by the California Air Resources Board (CARB). The Sacramento Valley is designated as a State and Federal non-attainment area for O_3, a State non-attainment area for PM_{10}, a Federal non-attainment area for $PM_{2.5}$, a Federal and State attainment area for CO, SO_2, and NO_2, and a State attainment area for sulfates, vinyl chloride and Pb[10].

[10] Sacramento Metropolitan Air Quality Management District. Air Quality Pollutants and Standard. http://www.airquality.org/air-quality-health/air-quality-pollutants-and-standards Site accessed 18 December 2017.

3.3.2 Regulatory Setting

3.3.2.1 Federal

U.S. Environmental Protection Agency: At the federal level, the U.S. EPA has been charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Federal Clean Air Act: The FCAA required the U.S. EPA to establish National Ambient Air Quality Standards (NAAQS), and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions.

The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The U.S. EPA has responsibility to review all state SIPs to determine conformance with the mandates of the FCAA, and the amendments thereof, and determine if implementation will achieve air quality goals. If the U.S. EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures.

Toxic Substances Control Act: The Toxic Substances Control Act (TSCA) first authorized the U.S. EPA to regulate asbestos in schools and Public and Commercial buildings under Title II of the law, which is also known as the Asbestos Hazard Emergency Response Act (AHERA). AHERA requires Local Education Agencies (LEAs) to inspect their schools for ACBM and prepare management plans to reduce the asbestos hazard. The Act also established a program for the training and accreditation of individuals performing certain types of asbestos work.

National Emission Standards for Hazardous Air Pollutants: Pursuant to the FCAA of 1970, the U.S. EPA established the National Emission Standards for Hazardous Air Pollutants (NESHAP). These are technology-based source-specific regulations that limit allowable emissions of HAPs.

3.3.2.2 State

California Air Resources Board: The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act of 1988. Other ARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts, establishing California Ambient Air Quality Standards (CAAQS), which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used.

California Clean Air Act: The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for ozone, CO, SO_2, and NO_2 by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible

measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

Regulatory Attainment Designations: Under the CCAA, the ARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, CO, and NO_2 as "does not meet the primary standards," "cannot be classified," or "better than national standards." For SO_2, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, the ARB terminology of attainment, nonattainment, and unclassified is more frequently used. The U.S. EPA uses the same sub-categories for nonattainment status: serious, severe, and extreme. In 1991, U.S. EPA assigned new nonattainment designations to areas that had previously been classified as Group I, II, or III for PM_{10} based on the likelihood that they would violate national PM_{10} standards. All other areas are designated "unclassified."

The state and national attainment status designations pertaining to the SVAB are summarized in **Table 3-4. Sacramento Metropolitan Air Management District Air Quality Thresholds of Significance – Criteria Pollutants**. The SVAB is currently designated as a nonattainment area with respect to the state PM_{10} standard and ozone standards. The SVAB is designated nonattainment for the national 8-hour ozone and $PM_{2.5}$ standards and ozone.

California Assembly Bill 170: Assembly Bill 170, Reyes (AB 170), was adopted by state lawmakers in 2003 creating Government Code Section 65302.1 which requires cities and counties in the San Joaquin Valley to amend their general plans to include data and analysis, comprehensive goals, policies and feasible implementation strategies designed to improve air quality.

Assembly Bills 1807 & 2588 - Toxic Air Contaminants: Within California, TACs are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

3.3.2.3 Local

Sacramento County General Plan: The Sacramento County General Plan – Air Quality Element includes the following objectives and policies that address air quality:

> *Policy AQ-13.* Use California State Air Resources Board (ARB) and SMAQMD guidelines for Sacramento County facilities and operations to comply with mandated measures to reduce emissions from fuel consumption, energy consumption, surface coating operations, and solvent usage.

Policy AQ-14. Support SMAQMD's development of improved ambient air quality monitoring capabilities and the establishment of standards, thresholds and rules to more adequately address the air quality impacts of plans and proposals proposed by the County.

Policy AQ-21. Support SMAQMD's particulate matter control measures for residential wood burning and fugitive dust.

Sacramento Metropolitan Air Quality Management District: The SMAQMD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained in the SVAB, within which the proposed Project is located. Responsibilities of the SMAQMD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the FCAA and the CCAA.

The SMAQMD Rules and Regulations that are applicable to the proposed Project include, but are not limited to, the following:

Regulation 04 – Prohibitory Rules

Rule 403 (Fugitive Dust): A Project shall take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates, from any construction, handling or storage activity, or any wrecking, excavation, grading, clearing of land or solid waste disposal operation. Reasonable precautions shall include, but are not limited to: 301.1 Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the construction of roadways or the clearing of land. 301.2 Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts; 301.3 Other means approved by the Air Pollution Control Officer.

Rule 404 (Particulate Matter) Except as otherwise provided in Rule 406 of this regulation, a person shall not discharge into the atmosphere from any source particulate matter in excess of 0.23 grams per dry standard cubic meter (0.1 grains per dry standard cubic foot).

Sacramento Metropolitan Air Quality Management District Thresholds of Significance. Projects that produce emissions that exceed the following thresholds shall be considered significant for a project level and/or cumulatively considerable impact to air quality. The following thresholds are defined for purposes of determining cumulative effects as the baseline for "considerable". Projects located within the SMAQMD will be subject to the following significance thresholds identified in tons per year (TPY):

Table 3-4. Sacramento Metropolitan Air Management District Air Quality Thresholds of Significance – Criteria Pollutants

SMAMD Air Quality Thresholds of Significance – Criteria Pollutants			
Pollutant/Precursor	Construction Emissions	Operational Emissions	
		~~Permitted Equipment & Activities~~	~~Non-Permitted Equipment & Activities~~
	Emissions ~~(tpy)~~	Emissions ~~(tpy)~~	~~Emissions (tpy)~~
~~CO~~	~~100~~	~~100~~	~~100~~
NO_X	~~15.51~~ 85 lbs/day	~~11.86~~ 65 lbs/day	~~11.86~~
ROG	No Threshold	~~11.86~~ 65 lbs/day	~~11.86~~
~~SO_X~~	~~27~~	~~27~~	~~27~~
PM_{10}	Zero, 14.6 tons/year or 80 lbs/day if all feasible BACT /BMPs are applied	Zero, 14.6 tons/year or 80 lbs/day if all feasible BACT /BMPs are applied	~~Zero, 14.6 if all feasible BACT /BMPs are applied~~
$PM_{2.5}$	Zero, 15 tons/year or 82 lbs/day if all feasible BACT /BMPs are applied	Zero, 15 tons/year or 82 lbs/day if all feasible BACT /BMPs are applied	~~Zero, 15 if all feasible BACT /BMPs are applied~~

3.3.1 Methodology

An Air Quality and Greenhouse Gas Emissions Evaluation Report, **Appendix A**, was prepared using CalEEmod, Version 2016.3.2 for the proposed Project in ~~December 2017~~ August 2018. The sections below detail the methodology of the air quality and greenhouse gas emissions report (**Appendix A**) and its conclusions.

3.3.1.1 Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the proposed Project were calculated using CalEEmod, Version 2016.3.2. The emissions modeling includes emissions generated by off-road equipment, haul trucks, and worker commute trips. Emissions were quantified based on anticipated construction schedules and construction equipment requirements provided by the project applicant. All remaining assumptions were based on the default parameters contained in the model. Localized air quality impacts associated with the proposed Project would be minor and were qualitatively assessed. Modeling assumptions and output files are included in **Appendix A**.

3.3.1.2 Long-Term Operational Emissions

Long-term operational emissions associated with the proposed Project were calculated using the CalEEmod, Version 2016.3.2. Emissions modeling included the use of off-road equipment and maintenance worker vehicle trips associated with routine maintenance activities. Stationary sources of emissions would be generated from use of electric pumps. Modeling assumptions and output files are included in **Appendix A**.

3.3.1.3 Thresholds of Significance

To assist local jurisdictions in the evaluation of air quality impacts, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has published the Thresholds of Significance for criteria pollutants and

greenhouse gas emissions[11]. Accordingly, the SMAQMD-recommended thresholds of significance are used to determine whether implementation of the proposed Project would result in a significant air quality impact. Projects that exceed these recommended thresholds would be considered to have a potentially significant impact to human health and welfare. The thresholds of significance are summarized, as follows:

Short-Term Emissions of Particulate Matter (PM_{10}): Construction impacts associated with the proposed Project would be considered significant if the feasible control measures for construction in compliance with Regulation VIII as listed in the SJVAPCD guidelines are not incorporated or implemented, or if project-generated emissions would exceed 14.6 tons per year (TPY).

Short-Term Emissions of Ozone Precursors (ROG and NO_x): Construction impacts associated with the proposed Project would be considered significant if the project generates emissions of Reactive Organic Gases (ROG) or NO_X that exceeds zero emissions and 85 pounds per day, respectively.

Long-Term Emissions of Particulate Matter (PM_{10}): Operational impacts associated with the proposed Project would be considered significant if the project generates emissions of PM_{10} that exceed zero emissions.

Long-Term Emissions of Ozone Precursors (ROG and NO_x): Operational impacts associated with the proposed Project would be considered significant if the project generates emissions of ROG or NO_X that exceeds ~~11.8625 TPY~~ 65 lbs/day.

Conflict with or Obstruct Implementation of Applicable Air Quality Plan: Due to the region's non-attainment status for ozone, $PM_{2.5}$, and PM_{10}, if the project-generated emissions of either of the ozone precursor pollutants (i.e., ROG and NO_x) or PM_{10} would exceed the SMAQMD's significance thresholds, then the project would be considered to conflict with the attainment plans. In addition, if the project would result in a change in land use and corresponding increases in vehicle miles traveled, the project may result in an increase in vehicle miles traveled that is unaccounted for in regional emissions inventories contained in regional air quality control plans.

Local Mobile-Source CO Concentrations: Local mobile source impacts associated with the proposed Project would be considered significant if the project contributes to CO concentrations at receptor locations in excess of the CAAQS (i.e. 9.0 ppm for 8 hours or 20 ppm for 1 hour).

Exposure to toxic air contaminants (TAC) would be considered significant if the probability of contracting cancer for the Maximally Exposed Individual (i.e., maximum individual risk) would exceed 10 in 1 million or would result in a Hazard Index greater than 1.

Odor impacts associated with the proposed Project would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors.

3.3.2 Impact Assessment

3.3.2.1 III-a) Conflict with or obstruct implementation of the applicable air quality plan?

a) Less than Significant Impact. As noted in Impact Assessment III-b) and III-c) below, implementation of the proposed Project would not result in short-term or long-term increases in emissions that would exceed applicable thresholds of significance. Projects that do not exceed the recommended thresholds would not be

[11] SMAQMD Thresholds of Significance Table. http://www.airquality.org/LandUseTransportation/Documents/CH2ThresholdsTable5-2015.pdf Accessed 18 December 2017.

considered to conflict with or obstruct the implementation of applicable air quality plans. Project related impacts to air quality would be considered less than significant.

3.3.2.2 III-b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

b) Less than Significant Impact. As demonstrated in **Table 3-5** and **Table 3-6,** the emissions generated by the proposed Project's construction and operations phases would not exceed the SMAQMD emission significance thresholds. Therefore, the impacts would be less than significant.

Table 3-5. Unmitigated Short-Term Construction-Generated Emissions of Criteria Air Pollutants

Short-Term Construction-Generated Emissions of Criteria Air Pollutants					
Source	~~Annual~~ Maximum Daily Emissions (~~Tons/Year~~)(1) (lbs/ day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
2018 Est. Project Construction Emissions	~~0.1528~~ 5.2209	~~1.6017~~ 59.6249	~~0.9719~~ 36.0495	~~0.3340~~ 27.2792	~~0.2013~~ 15.8977
SMAQMD Significance Thresholds:	*No Threshold*	*~~15.51~~ 85*	*~~100~~ No Threshold*	*Zero, ~~14.6~~ 80 lbs/day if all feasible BACT /BMPs are applied*	*Zero, ~~15~~ 82 lbs/day if all feasible BACT /BMPs are applied*
Exceed SMAQMD Thresholds?	*No*	*No*	*No*	*No, dust control will be implemented*	*No, dust control will be implemented*

1. *Emissions were quantified using CalEEmod Version 2016.3.2. Refer to* ***Appendix A*** *for modeling results and assumptions. Totals may not sum due to rounding.*

Table 3-6. Unmitigated Long-Term Operations-Generated Emissions of Criteria Air Pollutants

Long-Term Operations-Generated Emissions of Criteria Air Pollutants					
Category	Annual Emissions (~~Tons/Year~~)(1) (lbs/ day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	~~4.2750~~ 23.4284	~~0.00015~~ 0.0012	~~0.0162~~ 0.1293	~~0.00006~~ 0.0005	~~0.00006~~ 0.0005
Energy	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000
Water and Waste	0.0000	0.0000	0.0000	0.0000	0.0000
Total Proposed Project Emissions:	***~~4.2750~~ 23.4284***	***~~0.00015~~ 0.0012***	***~~0.0162~~ 0.1293***	***~~0.00006~~ 0.0005***	***~~0.00006~~ 0.0005***
SMAQMD Significance Thresholds:	*~~11.86~~ 65*	*~~11.86~~ 65*	*~~100~~ No Threshold*	*Zero, ~~14.6~~ 80 lbs/day if all feasible BACT /BMPs are applied*	*Zero, ~~15~~ 82 lbs/day if all feasible BACT /BMPs are applied*
Exceed SMAQMD Thresholds?	*No*	*No*	*No*	*No*	*No*

1. *Emissions were quantified using CalEEmod Version 2016.3.2. Refer to Appendix A for modeling results and assumptions. Totals may not sum due to rounding.*
2. *Emissions were quantified using CalEEmod Version 2016.3.2. Refer to Appendix A for modeling results and assumptions. Totals may not sum due to rounding.*

3.3.2.3 III c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

c) Less than Significant Impact.

Short-Term Construction-Generated Emissions

Construction-generated emissions are temporary in duration, lasting approximately two and a half months total. The construction of the proposed Project would result in the temporary generation of emissions associated with site grading and excavation, motor vehicle exhaust associated with construction equipment and worker trips, as well as the movement of construction equipment on unpaved surfaces.

Estimated construction-generated emissions are summarized in **Table 3-5**. As indicated, construction of the proposed Project would generate maximum uncontrolled annual emissions of approximately ~~0.1526 tons/year~~ 23.4284 lbs/ day of ROG, ~~1.6017 tons/year~~ 0.0012 lbs/day of NO_x, ~~0.9719 tons/year~~ 0.1293 lbs/day of CO, ~~0.3340 tons/year~~ 0.0005 lbs/day of PM_{10}, and ~~0.2013 tons/year~~ 0.0005 lbs/day of $PM_{2.5}$. Estimated construction-generated emissions would not exceed the ~~SJVAPCD~~ SMAQMD's significance thresholds of ~~15.51 tons/year~~ 65 lbs/day of NO_x, ~~100 tons/year of CO~~, ~~14.6 tons/year~~ 80 lbs/day PM_{10}, and ~~15 tons/year~~ 82 lbs/day $PM_{2.5}$.

It is important to note that the proposed Project would be required to comply with SMAQMD Regulation VI (Fugitive Dust). Mandatory compliance with SMAQMD Regulation VIII would further reduce emissions of

fugitive dust from the Project site, and adequately minimize the proposed Project's potential to adversely affect nearby sensitive receptors to localized PM impacts.

Given that project-generated emissions would not exceed applicable SMAQMD significance thresholds and the proposed Project would be required to comply with SMAQMD Regulation IV, construction-generated emissions of criteria pollutants would be considered less than significant.

Long-Term Operational Emissions

Long-term operation of the proposed Project would result in emissions generated by limited maintenance trips. As indicated, in **Table 3-6**, operation and maintenance of the proposed Project would not result in a substantial increase in emissions. The impact of operations and maintenance generated emissions would be considered less than significant.

3.3.2.4 III-d) Expose sensitive receptors to substantial pollutant concentrations?

d) Less than Significant Impact.

Toxic Air Contaminants

Implementation of the proposed Project would not result in the long-term operation of any major onsite stationary sources of TACs, nor would Project implementation result in an increase in vehicle trips along area roadways, in comparison to existing conditions. However, construction of the proposed Project may result in temporary increases in emissions of diesel-exhaust particulate matter (DPM) associated with the use of off-road diesel equipment during construction. Health-related risks associated with diesel-exhaust emissions are primarily associated with long-term exposure and associated risk of contracting cancer. As such, the calculation of cancer risk associated with exposure of to TACs are typically calculated based on a long-term (e.g., 70-year) period of exposure. The use of diesel-powered construction equipment, however, would be temporary and episodic and would occur over a relatively large area. Construction activities would occur over an approximate two-and-a-half-month construction, which would constitute less than 1 percent of the typical 70-year exposure period. As a result, exposure to construction-generated DPM would not be anticipated to exceed applicable thresholds (i.e. incremental increase in cancer risk of 10 in one million). Furthermore, no sensitive land uses have been identified in the vicinity of the proposed construction areas. For these reasons, this impact would be considered less than significant.

Naturally Occurring Asbestos

Naturally-occurring asbestos, which was identified by ARB as a TAC in 1986, is located in many parts of California and is commonly associated with ultramafic rock. The project site is not located near any areas that are likely to contain ultramafic rock[12]. As a result, risk of exposure to asbestos during the construction process would be considered less than significant.

Fugitive Dust

Construction of the proposed Project would include ground-disturbing activities which would be anticipated to result in increased emissions of airborne particulate matter. The proposed Project would be required to comply with SMAQMD's Rules 403 and 404 (Fugitive Dust and Particulate Matter). Mandatory compliance with SMAQMD's Rules 403 and 404 would reduce emissions of fugitive dust from the Project site. Furthermore, no sensitive land uses have been identified in the vicinity of the proposed construction areas.

[12] Van Gosen, B.S. and J.P. Clinkenbeard. 2011. Report Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California – California Geological Survey map Sheet 59. United States Geological Survey.

As a result, localized emissions of airborne particulate matter emitted during construction would be considered less than significant.

3.3.2.5 III-e) Create objectionable odors affecting a substantial number of people?

e) Less than Significant Impact. Implementation of the proposed Project would not result in long-term emissions of odors. However, construction of the Project would involve the use of a variety of gasoline or diesel-powered equipment that would emit exhaust fumes. Exhaust fumes, particularly diesel-exhaust, may be considered objectionable by some people. However, no sensitive land uses involving large concentrations of people have been identified in the vicinity of the proposed construction area. As a result, short-term construction activities would not expose a substantial number of people to frequent odorous emissions. This impact would be considered less than significant.

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3.4 Biological Resources

Table 3-7. Biological Resources

Biological Resources				
Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**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 Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
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?	☐	☒	☐	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
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?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
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?	☐	☒	☐	☐

3.4.1 Environmental Setting

The proposed Project sites are located within agricultural lands in the southern Sacramento Valley, northeast of the City of Elk Grove. The valley is bordered by the Sierra Nevada to the east, the Sacramento-San Joaquin Delta to the south, the California coastal ranges to the west, and the Klamath Mountains to the north.

The principal drainage of the project vicinity is the Cosumnes River, which flows from northeast to southwest and is adjacent to the southeastern boundaries of the project sites. Deer Creek, which is part of the Cosumnes River watershed, flows from northeast to southwest and is located adjacent to the northwest boundaries of the project sites. Both the Cosumnes River and Deer Creek contain relatively large areas of riparian, wetland, and aquatic ecosystems that support diverse populations of native plants and animals.

A reconnaissance-level field survey of the project sites was conducted on December 20, 2017 by Live Oak Associates, Inc. (LOA) biologist Geoffrey Cline and is used as the basis for this biological impacts evaluation. The complete report is contained in **Appendix B** of this Initial Study-Mitigated Negative Declaration.

The LOA reconnaissance survey consisted of driving the perimeter of the three sites and walking through representative areas of the sites and adjacent habitats while identifying the principal land uses and biotic habitats of the sites and adjacent lands, identifying plant and animal species encountered, and assessing the suitability of the sites' habitats for special-status species.

LOA conducted an analysis of potential project impacts based on the known and potential biotic resources of the project sites. Sources of information used in the preparation of this analysis included: (1) the *California Natural Diversity Data Base* (CDFW 2018), (2) the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2018), and (3) manuals, reports, and references related to plants and animals of the Sacramento Valley region. Focused surveys for sensitive biological resources were not conducted for this study. The field survey conducted for this study was sufficient to assess the significance of possible biological impacts associated with development of the project sites and to assess the need for more detailed surveys.

A number of special status plants and animals occur in the project vicinity (Figure 4 – **Appendix B**). These species, and their potential to occur on the sites, are listed in Table 1 of **Appendix B**. Sources of information for this table included *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1988), *California Natural Diversity Data Base* (CDFW 2018), *Special Animals List* (CDFW 2017a), *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2017b), *Amphibian and Reptile Species of Special Concern in California* (CDFG 1994), *The Jepson Manual: Vascular Plants of California, second edition* (Baldwin et al 2012), and *the on-line version of California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2018).

A search of published accounts for all of the relevant special status plant and animal species was conducted for the *Sloughhouse* and *Elk Grove* USGS 7.5-minute quadrangles, where the project sites are located, and for the ten surrounding quadrangles (*Sacramento East, Carmichael, Buffalo Creek, Folsom SE, Florin, Carbondale, Bruceville, Galt, Clay,* and *Goose Creek*) using the California Natural Diversity Data Base (CNDDB) Rarefind 5 (2018) program. It is important to note that the CNDDB is a volunteer database; therefore, it may not contain all known literature records.

3.4.1.1 Existing Conditions

The Project sites consist of agricultural lands and roads, and the Cosumnes River. The topography of the sites is relatively level, ranging from 75 feet National Geodetic Vertical Datum (NGVD) in the southern portion of the Teichert Ranch site to 100 feet NGVD in the northern portion of the Rooney Ranch site. Four biotic habitats / land use types were observed on the proposed Project site during the December 2017 biological field survey: vineyard, managed fallow field, riparian, and aquatic (see **Appendix B**).

3.4.2 Regulatory Setting

3.4.2.1 Federal

Endangered Species Act: The Federal Endangered Species Act (FESA) protects plants and wildlife that are listed as endangered or threatened by the USFWS and National Oceanic and Atmospheric Administration (NOAA) Fisheries. Section 9 of the FESA prohibits the taking of listed wildlife, where taking is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any listed plant on federal land and removing, cutting, digging-up, damaging, or destroying any listed plant on non-federal land in knowing violation of state law (16USC1538). Pursuant to Section 7 of the FESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding,

could adversely affect a listed plant or wildlife species or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to another authorized activity, provided the action will not jeopardize the continued existence of the species. Section 10 of the FESA provides for issuance of incidental take permits to private parties, provided a Habitat Conservation Plan (HCP) is developed.

Migratory Bird Treaty Act: The MBTA implements international treaties devised to protect migratory birds and any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. As authorized by the MBTA, the USFWS issues permits to qualified applicants for the following types of activities: falconry, raptor propagation, scientific collecting, special purposes (rehabilitation, education, migratory game bird propagation, and salvage), take of depredating birds, taxidermy, and waterfowl sale and disposal. The regulations governing migratory bird permits are in 50 CFR part 13 General Permit Procedures and 50 CFR part 21 Migratory Bird Permits. The State of California has incorporated the protection of birds of prey in Code § 3800, 3513, and 3503.5 of the CDFW Code.

Federal Clean Water Act: The federal Clean Water Act's (CWA's) purpose is to "restore and maintain the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA prohibits the discharge of dredged or fill material into waters of the United States without a permit from the U.S. Army Corps of Engineers (ACOE). The definition of waters of the United States includes rivers, streams, estuaries, the territorial seas, ponds, lakes, and wetlands. Wetlands are defined as those areas "that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3 7b)." The USEPA also has authority over wetlands and may override an ACOE permit. Substantial impacts to wetlands may require an individual permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or Waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the RWQCB.

3.4.2.2 State

California Endangered Species Act: The California Endangered Species Act (CESA) generally parallels the main provisions of the FESA, but unlike its federal counterpart, the CESA applies the take prohibitions to species proposed for listing (called candidates by the state). §2080 of California Fish and Game Code (FGC)[13] prohibits the taking, possession, purchase, sale, and import or export of endangered, threatened, or candidate species, unless otherwise authorized by permit or in the regulations. Take is defined in § 86 of the FGC Code as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CESA allows for take incidental to otherwise lawful development projects. State lead agencies are required to consult with the California Department of Fish and Wildlife (CDFW) to ensure that any action they undertake is not likely to jeopardize the continued existence of any endangered, threatened, or candidate species or result in destruction or adverse modification of essential habitat. The CDFW administers the act and authorizes take through § 2081 agreements (except for designated fully protected species).

Fully Protected Species: The State of California first began to designate species as fully protected prior to the creation of the CESA and FESA. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction, and included fish, amphibians, reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered pursuant to the CESA and/or FESA. The regulations that implement the Fully Protected Species Statute

[13] California Department of Fish and Game Code

(CDFG Code § 4700) provide that fully protected species may not be taken or possessed at any time. Furthermore, the CDFG prohibits any state agency from issuing incidental take permits for fully protected species, except for necessary scientific research.

Native Plant Protection Act: Regarding listed rare and endangered plant species, the CESA defers to the California Native Plant Protection Act (NPPA) of 1977 (CDFG Code § 1900 to 1913), which prohibits importing of rare and endangered plants into California, and the taking and selling of rare and endangered plants. The CESA includes an additional listing category for threatened plants that are not protected pursuant to NPPA. In this case, plants listed as rare or endangered pursuant to the NPPA are not protected pursuant to CESA but can be protected pursuant to the CEQA. In addition, plants that are not state listed, but that meet the standards for listing, are also protected pursuant to CEQA (Guidelines, § 15380). In practice, this is generally interpreted to mean that all species on lists 1B and 2 of the CNPS Inventory potentially qualify for protection pursuant to CEQA, and some species on lists 3 and 4 of the CNPS Inventory may qualify for protection pursuant to CEQA. List 3 includes plants for which more information is needed on Taxonomy or distribution. Some of these are rare and endangered enough to qualify for protection pursuant to CEQA. List 4 includes plants of limited distribution that may qualify for protection if their abundance and distribution characteristics are found to meet the standards for listing.

3.4.2.3 Local

The County of Sacramento General Plan addresses biological resource issues in its Conservation Element and Land Use Element. The Conservation Element addresses conservation of the County's water, mineral, soil, vegetation, wildlife, aquatic, and cultural resources, and provides for materials recycling. It includes a number of goals and objectives relevant to the Omochumne-Hartnell Water District Groundwater Recharge System Project:

CO-59. Ensure mitigation occurs for any loss of or modification to the following types of acreage and habitat function:

- vernal pools,
- wetlands,
- riparian,
- native vegetative habitat, and
- special status species habitat.

CO-128. Require screens on diversion pumps or similar bypass apparatus to reduce fish mortality.

CO-139. Native trees other than oaks, which cannot be protected through development, shall be replaced with in-kind species in accordance with established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed.

CO-140. For projects involving native oak woodlands, oak savannah or mixed riparian areas, ensure mitigation through either of the following methods:

- An adopted habitat conservation plan.

- Ensure no net loss of canopy area through a combination of the following: (1) preserving the main, central portions of consolidated and isolated groves constituting the existing canopy and (2) provide an area on-site to mitigate any canopy lost. Native oak mitigation area must be a contiguous area on-

site which is equal to the size of canopy area lost and shall be adjacent to existing oak canopy to ensure opportunities for regeneration.

• Removal of native oaks shall be compensated with native oak species with a minimum of a one to one dbh replacement.

• A provision for a comparable on-site area for the propagation of oak trees may substitute for replacement tree planting requirements at the discretion of the County Tree Coordinator when removal of a mature oak tree is necessary.

• If the project site is not capable of supporting all the required replacement trees, a sum equivalent to the replacement cost of the number of trees that cannot be accommodated may be paid to the County's Tree Preservation Fund or another appropriate tree preservation fund.

• If on-site mitigation is not possible given site limitation, off-site mitigation may be considered. Such a mitigation area must meet all of the following criteria to preserve, enhance, and maintain a natural woodland habitat in perpetuity, preferably by transfer of title to an appropriate public entity. Protected woodland habitat could be used as a suitable site for replacement tree plantings required by ordinances or other mitigations.

o Equal or greater in area to the total area that is included within a radius of 30 feet of the dripline of all trees to be removed;
o Adjacent to protected stream corridor or other preserved natural areas;
o Supports a significant number of native broadleaf trees; and
o Offers good potential for continued regeneration of an integrated woodland community.

3.4.3 Impact Assessment

3.4.3.1 IV-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 or U.S. Fish and Wildlife Service?

a) Less than Significant Impact with Mitigation Incorporated. As described in Section 1.0 of the Biological Evaluation report (**Appendix B**), the proposed Project intends to increase groundwater recharge in the adjacent Cosumnes River, allowing the aquifer to be recharged, and the Cosumnes River to run for longer periods during the spring and summer and begin flowing earlier in the fall. The project area includes three properties (Rooney Ranch, Mosher Property, and the Teichert Ranch) that equal approximately 1,253 acres and are adjacent to the Cosumnes River. The Project will flood these fields between the months of November and March, when streamflow is high, excess water is available, the agricultural fields are dormant, and irrigation of the fields is not occurring.

A search of published accounts for all of the relevant special status plant and animal species was conducted for the *Sloughhouse* and *Elk Grove* USGS 7.5-minute quadrangles, where the project sites are located, and for the ten surrounding quadrangles (*Sacramento East, Carmichael, Buffalo Creek, Folsom SE, Florin, Carbondale, Bruceville, Galt, Clay,* and *Goose Creek*) using the California Natural Diversity Data Base (CNDDB) Rarefind 5 (2018) program. It is important to note that the CNDDB is a volunteer database; therefore, it may not contain all known literature records.

PLANTS (adapted from CDFW 2018 and CNPS 2018)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence on the Project Site
Ione Manzanita (*Arctostaphylos myrtifolia*)	FE, CNPS 1B	Occurs in chaparral and foothill woodland habitats with acidic sandy or clay soils at elevations of 230-2,500 feet. Blooms Jan.-Feb.	**Absent.** Habitats required by this species are absent from the project sites and the project sites are below the elevational range for this species.
Ione Buckwheat (*Eriodonum apricum var. apricum*)	FE, CE, CNPS 1B	Occurs in chaparral habitats with clay soils at elevations of 260-650 feet. Blooms Jun.-Oct.	**Absent.** Habitats required by this species are absent from the project sites and the project sites are below the elevational range for this species.
Irish Hill Buckwheat (*Eriogonum apricum var. prostratum*)	FE, CE, CNPS 1B	Occurs in chaparral habitats with clay soils at elevations of 295-650 feet. Blooms Jun.-Sept.	**Absent.** Habitats required by this species are absent from the project sites and the project sites are below the elevational range for this species.
Boggs Lake Hedge-hyssop (*Gratiola heterosepala*)	CE, CNPS 1B	Occurs in shallow water of lake-margin and vernal pool edge habitats at elevations below 5,250 feet. Blooms Apr.-Sept.	**Absent.** Habitats required by this species are absent from the project sites.
Slender Orcutt Grass (*Orcuttia tenuis*)	FT, CE, CNPS 1B	Occurs in vernal pool habitat at elevations of 650-3,600 feet. Blooms May-Oct.	**Absent.** Habitats required by this species are absent from the project sites and the project sites are below the elevational range for this species.
Sacramento Orcutt Grass (*Orcuttia viscida*)	FE, CE, CNPS 1B	Occurs in vernal pool habitat at elevations below 330 feet. Blooms Apr.-Jun.	**Absent.** Habitats required by this species are absent from the project sites.
Wooly Rose-mallow (*Hibiscus lasiocarpos var. occidentalis*)	CNPS 1B	Occurs in freshwater wetlands, wet banks, and marsh habitats, usually in large rivers or wetland features, at elevations below 330 feet. Blooms Jul.-Nov.	**Unlikely.** No observations of this species have been recorded within this area; all within the vicinity are lower in the Sacramento Valley with the nearest over 12 miles to the west.
Parry's Horkelia (*Horkelia parryi*)	CNPS 1B	Occurs in chaparral and foothill woodland habitats at elevations of 260-2,950 feet. Blooms Jan.-Feb.	**Absent.** Habitats required by this species are absent from the project sites and the project sites are below the elevational range for this species.
Northern California Black Walnut (*Juglans hindsii*)	CNPS 1B	Occurs along streams and disturbed slopes in foothill woodland and wetland-riparian habitats at elevations below 1,000 feet. Blooms Apr.-May.	**Possible.** Walnut trees were observed in the riparian habitat within or adjacent to the sites.
Ahart's Dwarf Rush (*Juncus leiospermus var. ahartii*)	CNPS 1B	Occurs in vernal pool margins, grassland swales, and gopher mounds at elevations of 100-300 feet. Blooms Mar.-May.	**Absent.** Habitats required by this species are absent from the project sites.
Delta Tule Pea (*Lathyrus jepsonii var. jepsonii*)	CNPS 1B	Occurs in coastal and estuarine marsh habitats at elevations below 100 feet. Blooms Apr.-Aug.	**Absent.** Habitats required by this species are absent from the project sites and the project sites are at or near the upper elevational range for this species.
Legenere (*Legenere limosa*)	CNPS 1B	Occurs in wet areas, vernal pools, and ponds at elevations below 3,100 feet. Blooms May-Jun.	**Absent.** Habitats required by this species are absent from the project sites.
Heckard's Pepper-grass (*Lepidium latipes var. heckardii*)	CNPS 1B	Occurs in fresh-water marsh and alkaline soils in grasslands surrounding vernal pools at elevations around 75 feet. Blooms Mar.-May.	**Absent.** Habitats required by this species are absent from the project sites.
Mason's Lilaeopsis (*Lilaeopsis masonii*)	CR, CNPS 1B	Occurs in intertidal marsh and streambank habitats at elevations below 100 feet. Blooms Jun.-Aug.	**Absent.** Habitats required by this species are absent from the project sites and the project sites are at or near the upper elevational range for this species.
Delta Mudwort (*Limosella australis*)	CNPS 1B	Occurs in muddy or sandy intertidal flats and brackish water at elevations below 35 feet. Blooms in Apr.	**Absent.** Habitats required by this species are absent from the project sites and the project sites are above the elevational limit for this species.

Pincushion Navarretia (*Navarretia myersii* ssp. *myersii*)	CNPS 1B	Occurs in vernal pools at elevations of 65-295 feet. Blooms in May.	**Absent.** Habitats required by this species are absent from the project sites.
Sanford's Arrowhead (*Sagittaria sanfordii*)	CNPS 1B	Occurs in freshwater-marsh habitat of ponds and ditches at elevations below 985 feet. Blooms May-Oct.	**Absent.** Habitats required by this species are absent from the project sites.
Saline Clover (*Trifolium hydrophilum*)	CNPS 1B	Occurs in salt marshes and open areas with alkaline soils at elevations below 985 feet. Blooms Apr.-Jun.	**Absent.** Habitats required by this species are absent from the project sites.
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	FT	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt depression pools.	**Absent.** Habitat suitable for this species is absent from the project sites.
Vernal Pool Tadpole Shrimp (*Lepidurus packardi*)	FE	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt depression pools.	**Absent.** Habitat suitable for this species is absent from the project sites.
Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)	FT	Lives in mature elderberry shrubs of California's Central Valley and Sierra Foothills, including the majority of Sacramento County. Adults are active from March to June.	**Present.** Habitat suitable for this species, in the form of mature elderberry shrubs, is present within and immediately adjacent to the project sites, and multiple CNDDB observations occur within and adjacent to the sites. See expanded discussion (Section 2.5.1) below.
Steelhead – California Central Valley DPS (*Oncorhynchus mykiss irideus*)	FT	Cold-water streams with adequate dissolved oxygen and gravel substrates free of excessive silt for spawning in coastal streams and tributaries of San Francisco and San Pablo bays.	**Present.** Occurs within this stretch of the Cosumnes River; however, this area is a population sink due to the lack of breeding habitat and evidence of any breeding occurring in this stretch. See expanded discussion below.
Chinook Salmon – Central Valley Spring-Run ESU (*Oncorhynchus tshawytscha*)	CT, FT	After one to six years at sea and in the spring adult Chinook salmon migrate up streams, oversummer as adults, and spawn in the following fall. They prefer rivers with suitable gravel types, composition, water depth, and velocity to lay eggs. Eggs hatch 3-5 months after deposition. Juveniles may spend three months to two years in freshwater before migrating to estuarine areas and the ocean. Migration usually occurs in the spring.	**Absent.** The Cosumnes River is not a spring run river for this species because it lacks oversummering habitat for adults. Spring run salmon have not been observed in at least the last 20 years (pers. comm. Trevor Kennedy).
Longfin Smelt (*Spirinchus thaleichthys*)	FC, CT, SSC	Bays, estuaries, and nearshore coastal areas for their adult life; freshwater rivers for spawning.	**Absent.** Downstream weirs would prevent this species from accessing the project sites.
California Tiger Salamander (*Ambystoma californiense*)	FT, CT	Located in Central California, in the Central Valley, along the coast, and in the bay area. Requires vernal pools or temporary rain water pools for breeding and small mammal burrows for aestevation.	**Absent.** Habitats required for breeding are absent from the project sites. Relatively few small mammal burrows were observed during the December 2017 field survey. Deer Creek to the northwest and the Cosumnes River to the southeast would act as barriers for species movement. The nearest historical (1993) CNDDB observation is seven miles to the southeast of the sites.
Giant Gartersnake (*Thamnophis gigas*)	FT, CT	Often occurs around rice fields and in open, treeless areas, and also in marshes, sloughs, drainage canals, and irrigation ditches, occasionally in slow-moving creeks. Prefers locations with surface water vegetation or vegetation close to the water edge for basking.	**Unlikely.** Habitats of the project sites are marginal for this species and lack the preferred foraging and resting vegetation and waterway types preferred by this species. One historical (1983) CNDDB observation is approximately 8 miles to the east, upstream from the project sites, on the Cosumnes River. Additional CNDDB observations occur approximately 6.5 miles southwest of

			the project sites, but do not occur within the Cosumnes River or Deer Creek. This species may occasionally pass through the project sites in route to more suitable habitat.
Western Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*)	FT, CE	Once a common breeding species in riparian habitats of lowland California, this species currently breeds consistently in only two California localities: along the Sacramento and South Fork Kern Rivers.	**Unlikely.** The project sites are outside of the current range of this species. This species may occasionally fly over or through the project sites on its way to or from breeding areas.
California Black Rail (*Laterallus jamaicensis coturniculus*)	CT, CFP	Prefers marshes, swamps, and wet meadows and is dependent on aquatic plants, insects, and crustaceans.	**Absent.** Habitats required for this species are absent from the project sites.
Bank Swallow (*Riparia riparia*)	CT	Prefers riverbanks, creeks, seashores, and lakes. Nests in colonies in vertical streamside banks or cliffs.	**Possible.** While the nearest historical (1987) CNDDB observation is 3.4 miles to the east of the Rooney Ranch site, the banks where the intakes are located are not vertical and do not support suitable breeding habitat. However, this species may forage over the sites.
Western Snowy Plover (*Charadrius alexandrinus nivosus*)	FT, CSC	Breeding migrant to the Sacramento Valley, where it may be found on salt pond levees and shores of large alkali lakes. Requires sandy, gravelly, or friable soils for nesting.	**Unlikely.** Suitable habitat for the western snowy plover is absent from the project sites, and the site is situated several miles outside of the known breeding distribution of this species. The nearest nesting occurrence of western snowy plover is 25 miles to the northeast at some sewage ponds.
Tricolored Blackbird (*Agelaius tricolor*)	CE	Nests colonially near fresh water in dense cattails or tules, or in thickets of willows or shrubs. Forages in grassland and cropland areas.	**Possible.** Tricolored blackbirds could potentially forage in managed fallow fields of the sites; however, breeding habitat is marginal. Seventeen CNDDB occurrences are located within 3.1 miles of the sites.
Bald Eagle (*Haliaeetus leucocephalus*)	CFP	In California, breeds in mountain and foothill forests near reservoirs, lakes, and rivers, and winters near Central Valley reservoirs. Primarily feeds on fish and waterfowl, and may also eat carrion.	**Possible.** The Cosumnes River provides adequate foraging habitat for this species and trees of the sites and vicinity may also provide marginal breeding habitat; however, bald eagles are more likely to nest near a larger body of water.
Golden Eagle (*Aquila chrysaetos*)	CFP	Hunts over open terrain for rodents, lagomorphs and occasionally birds and reptiles. Nests on cliffs of all heights and in large trees in open areas.	**Possible.** The managed fallow field provides potential foraging habitat for this species. The trees of the sites provide marginal breeding habitat, and it is unlikely they would nest onsite.
White-Tailed Kite (*Elanus leucurus*)	CFP	Occurs in savanna, open woodlands, marshes, desert grassland, and cultivated fields. Prefer lightly grazed or ungrazed fields for foraging.	**Present.** One white-tailed kite was observed perching on a small valley oak tree within the managed fallow field of the Mosher Property site. This species likely forages in the managed fallow field and may nest in any of the trees within and adjacent to the sites.
Swainson's Hawk (*Buteo swainsoni*)	CT	This breeding-season migrant to California nests in mature trees in riparian areas and oak savannah, and occasionally in lone trees at the margins of agricultural fields. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations. This species is unlikely to be present in California when the fields are flooded.	**Likely.** Eighteen CNDDB observations have been recorded within 3.1 miles of the project sites, including a 1995 nesting occurrence immediately adjacent to the Rooney Ranch site. Suitable nest trees occur within and immediately adjacent to the sites, and the managed fallow field is likely used for foraging.

Sacramento Splittail (*Pogonichthys macrolepidotus*)	CSC	San Francisco Estuary with spawning occurring in flooded vegetation, including the Yolo Bypass.	**Absent.** Habitats required by this species are absent from the project sites.
Chinook Salmon – Central Valley Fall / Late Fall-Run ESU (*Oncorhynchus tshawytscha*)	CSC	After 1-6 years at sea, adult Chinook salmon migrate up streams with suitable gravel types, composition, water depth, and velocity to lay eggs. Eggs hatch 3-5 months after deposition. Juveniles may spend up to two years in freshwater before migrating to estuarine areas and the ocean. Migration usually occurs in the late winter and spring.	**Present.** Fall- and late fall-run Chinook salmon have been observed migrating up the Cosumnes River to breed (pers. comm. Trevor Kennedy). See expanded discussion for fish (Section 2.5.2), below.
Pacific Lamprey (*Entosphenus tridentatus*)	CSC	Stream and river reaches with relatively stable flow conditions, with a mix of deep pools with good cover, low velocity resting areas with fine silt or sand, and silt-free cobble areas with summertime temperatures that may rarely exceed 68 degrees Fahrenheit.	**Present.** This species has been observed in this stretch of the Cosumnes River (pers. comm. Trevor Kennedy). See expanded discussion for fish (Section 2.5.2), below.
Western Spadefoot (*Spea hammondii*)	CSC	Mainly occurs in grasslands of San Joaquin Valley. Vernal pools or other temporary wetlands are required for breeding. Aestivates in underground refugia such as rodent burrows, typically within 1,200 ft. of aquatic habitat.	**Absent.** Wetland habitat suitable for breeding by the western spadefoot is absent from the project sites and potential aestivation habitat is marginal.
Coast Horned Lizard (*Phrynosoma blainvillii*)	CSC	Occurs in the lower Sierra foothills and throughout the central and southern California coast in relatively open areas.	**Absent.** Habitats required by this species are absent from the project sites and the projects sites are below the elevational range for this area.
Western Pond Turtle (*Emys marmorata*)	CSC	An aquatic turtle of ponds, marshes, slow-moving rivers, streams and irrigation ditches with aquatic vegetation. Needs basking sites and sandy banks or grassy open fields for egg laying.	**Likely.** This species likely occurs in Deer Creek and the Cosumnes River, and may venture onto the sites to cross between these waterways, use the riparian habitats for cover, and potentially nest in the fallow field. The nearest CNDDB observations occur approximately 5 miles from the sites. One CNDDB observation is located nine miles southwest of the project within a marsh connected to the Cosumnes River.
Northern Harrier (*Circus cyaneus*)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands. Nests on ground, generally in wet areas, although grassland, pasture, and cultivated fields may be used.	**Present.** This species was observed foraging over the managed fallow field of the Mosher Property, and also has the potential to nest in this field.
Grasshopper Sparrow (*Ammodramus savannarum*)	CSC	Prefers prairie grasslands, pastures, old weedy fields, palmetto scrub, grain fields, and hayfields.	**Possible.** This species may use the managed fallow field for foraging and breeding.
Song Sparrow ("Modesto" population (*Melospiza melodia*)	CSC	Prefers forest edges, thickets, and marshes with open grassy feeding areas. Current distribution is limited to the San Francisco Bay Delta.	**Absent.** The project sites are outside of the known range for this species.
Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)	CSC	Nests in freshwater marshes. During migration and winter it prefers open, cultivated lands, fields, and pastures.	**Possible.** This species may occasionally forage over the managed fallow field, but would not breed on or adjacent to the sites due to the lack of freshwater marshes.
Mountain Plover (*Charadrius montanus*)	CSC	A winter migrant to California, this species forages in short grasslands and freshly plowed fields of the Central Valley. Breeds on open plains in the Rocky Mountain region.	**Absent.** Habitats required by this species are absent from the project sites.

Burrowing Owl (*Athene cunicularia*)	CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows.	**Unlikely.** This species may occasionally forage over the managed fallow field of the Mosher Property, but is unlikely to nest or roost in the field, or elsewhere on site, due to incompatible vegetative cover and scarcity of suitable rodent burrows. Three CNDDB observations occur within 3.1 miles of the sites, all within grassland habitat.
Purple Martin (*Progne subis*)	CSC	Breeds in the Central Valley. Prefers open woodlands, residential areas, and agricultural lands. Generally prefers to nest in artificial nest boxes.	**Unlikely.** This species may utilize the riparian habitat of the sites for foraging; however, the closest CNDDB observations are in the City of Sacramento, approximately 11 miles to the northwest.
Loggerhead Shrike (*Lanius ludovicianus*)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. In the Central Valley, nests in riparian areas, desert scrub, and agricultural hedgerows.	**Likely.** The riparian habitat of the sites provides suitable breeding habitat and the vineyards and managed fallow field provide suitable foraging habitat.
Pallid Bat (*Antrozous pallidus*)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally take insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and buildings.	**Possible.** Individuals of this species could potentially roost in the trees within and adjacent to the sites, and forage in or over the sites' vineyards and managed fallow field. The nearest CNDDB observation is approximately 14 miles to the east of the sites.
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	CSC	Primarily a cave-dwelling bat that may also roost in buildings. Occurs in a variety of habitats.	**Unlikely.** Roosting and breeding habitat for this species is absent from the project sites; however, this species may occasionally forage over the sites. The nearest CNDDB observation is over 28 miles to the east, in the Sierra foothills.
Spotted Bat (*Euderma maculatum*)	CSC	Forages in desert-scrub, pinyon-juniper woodland, Ponderosa pine, mixed conifer forest, canyon bottoms, rims of cliffs, riparian areas, fields, and open pasture. Roosts in cracks, crevices, and caves or high fractured rock cliffs.	**Absent.** Roosting and breeding habitat for this species is absent from the project sites and vicinity. The nearest CNDDB observation is over 55 miles to the southeast, in the Sierra foothills.
Western Mastiff Bat (*Eumops perotis* ssp. *californicus*)	CSC	Found in open, arid to semi-arid habitats, including dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas, where it feeds on insects in flight. Roosts most commonly in crevices in cliff faces but may also use high buildings and tunnels.	**Unlikely.** Breeding habitat is absent; however, this species may occasional forage over the sites. The nearest CNDDB observation is approximately 50 miles to the southeast.
Western Red Bat (*Lasiurus blossevillii*)	CSC	Roosts adjacent to streams or open fields, in orchards, and sometimes in rural areas, and prefers riparian areas with willows, cottonwoods, and sycamores.	**Possible.** Riparian habitats of the sites provide suitable roosting and breeding habitat for this species, and Deer Creek and the Cosumnes River in the area provide suitable foraging habitat.
American Badger (*Taxidea taxus*)	CSC	Uncommon resident statewide; most abundant in drier open stages of most shrub, forest, and herbaceous habitats.	**Unlikely.** Habitats of the sites are marginal for this species. The nearest CNDDB observation is over four miles to the northwest.

Occurrence Terminology:

Present: Species observed on the site at time of field surveys or during recent past.
Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.

Possible: Species not observed on the site, but it could occur there from time to time.
Unlikely: Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient.
Absent: Species not observed on the site and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CR	California Rare
FPT	Federally Threatened (Proposed)	CFP	California Fully Protected
FC	Federal Candidate	CSC	California Species of Special Concern

CNPS	California Native Plant Society Listing		
1A	Plants Presumed Extinct in California	2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere
1B	Plants Rare, Threatened, or Endangered in California and elsewhere		

Project-Related Mortality of Valley Elderberry Longhorn Beetle – Potential Impacts. There are historical VELB observations on and adjacent to the project sites, and during the December 2017 field survey elderberry shrubs with beetle exit holes were observed on and adjacent to the site. The USFWS considers all stems equal to or greater than one inch at ground level habitat for the VELB. Therefore, the removal of any stems one inch or greater is considered "take" of the VELB, requiring "take" authorization from the USFWS. The USFWS also considers construction activities including grading and the operation of vehicles and other equipment within 20 feet of the dripline of an elderberry bush to constitute "take" of the VELB. Grading, trenching, and mowing within 100 feet of an elderberry bush during the flight season (March through June) may constitute "take" of the VELB and requires notification of the USFWS (see Appendix E). Mortality of this species or impacts to its obligatory habitat as a result of project construction activities would violate the federal Endangered Species Act and is considered a potentially significant impact under CEQA.

Flooding of the vineyard and managed fallow fields, where some elderberry shrubs are located, would not likely impact the VELB or the shrub, or be considered a potentially significant impact under CEQA. This species is very tolerant, and even thrives in regularly saturated and irrigated soils. As discussed, these fields are occasionally flooded when Deer Creek overflows, and the shrubs downstream of these areas have persisted during these flood events. Most of the elderberry shrubs on or adjacent to the site are at the upper elevations of the vineyards or on the bank between the site and the Cosumnes River or Deer Creek, so it is unlikely they would experience flooding. One elderberry shrub is located along the boundary between the Mosher Property and Rooney Ranch sites, west of the Cosumnes River bank (see Picture 8 of Appendix C). This shrub may occasionally be subject to flowing water from proposed flooding of the Rooney Ranch, but it would not remain inundated because it is located at a five-foot drop in elevation on the site, between the Rooney Ranch and Mosher Property. The general slope of the area from the northeast to the southwest would continue to sheet flow water away from this shrub.

Project-Related Mortality of Valley Elderberry Longhorn Beetle – Mitigation. Construction of the new diversions, pumps, and conveyance valves and pipelines could result in a potentially significant effect on the VELB. To prevent this, the following Mitigation measures will be implemented.

> ***Mitigation 1a (protocol survey).*** Prior to the start of construction, a qualified biologist will survey for VELB habitat (i.e. elderberry shrubs) within and adjacent to proposed construction zones. All elderberry shrubs with stems one inch or greater in diameter at ground level encountered will be mapped using a GPS unit and flagged in the field for identification by construction crews.
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> ***Mitigation 1b (avoidance).*** The applicant shall design the project to avoid existing elderberry shrubs with stems measuring one inch in diameter or greater at ground level and a 20-foot buffer around their dripline. Where possible, construction activities will take place outside of the VELB's

flight season (March through June). If construction activities involve grading, trenching, or mowing, and are to occur during the flight season, the applicant shall design the project to avoid existing elderberry shrubs and a 100-foot buffer around their dripline. This will require that orange construction fencing be installed around each shrub at least 20 or 100 feet, respectively, from the dripline, and that signs be attached to the fencing identifying the shrubs as endangered species habitat. Should a 100-foot buffer not be feasible, the USFWS will be consulted prior to proceeding with construction activities. Prior to initiating any construction activity where elderberry bushes and a buffer are to be protected from disturbance, a biologist must make a brief on-site instructional presentation to construction crews about the VELB and the consequences of destroying its habitat without take authorization of the USFWS. If construction work is to occur during the beetle's flight season, then the work area must be wetted each day to avoid the creation of dust that may adversely affect the beetle's feeding and flight. The USFWS's *Guidelines for the Valley Elderberry Longhorn Beetle* (1999) is provided in Appendix E.

Mitigation 1c (compensation). If individual shrubs with stems one inch or greater in diameter at ground level and a 20-foot buffer around these shrubs cannot be avoided, they shall be transplanted to a conservation area following the methods described in the USFWS's *Guidelines for the Valley Elderberry Longhorn Beetle* (1999). Each elderberry shrub that is transplanted or destroyed will be replaced in a conservation area with elderberry seedlings or cuttings at a ratio ranging from 1:1 to 8:1, and native plants associated with the project site will be planted at ratios ranging from 1:1 to 2:1, as described in the USFWS's *Guidelines for the Valley Elderberry Longhorn Beetle* (1999).

Implementation of the above mitigation measures would reduce impacts to the VELB to a less than significant level under CEQA. Should compensation be required because individual shrubs and a 20-foot buffer cannot be avoided, then the USFWS requires the applicant to obtain take authorization before the project can begin. Take authorization would be via Section 7 of the Endangered Species Act (ESA) if a federal nexus exists (i.e., there is federal funding for the project, or another federal permit is required). If no federal nexus exists, take authorization would occur via Section 10 of the ESA. This would require the preparation of a Habitat Conservation Plan (HCP).

Project-Related Mortality of Central Valley Steelhead, Central Valley Chinook Salmon (Fall-run), and Pacific Lamprey - Potential Impacts. The Central Valley steelhead, Central Valley Chinook salmon (fall-run), and Pacific lamprey are known to occur within the aquatic habitat of the sites (i.e. the Cosumnes River). Construction of the new intake structures could potentially impact individuals of these species. In addition, if larvae or juveniles of these species are sucked into the diversion pumps during operation when they are migrating downstream from February 15 through June, they would either be killed from the impellor or deposited into the vineyard or managed fallow field habitats until these areas dry. Mortality of any of these species as a result of project activities would violate the state and/or federal Endangered Species Acts and is considered a potentially significant impact under CEQA. While the project intends to divert some water from the Cosumnes River during high flows, the amount of water diverted from the river would not be significant enough to impact these species because diversion would occur during high flows and enough water would remain in the Cosumnes River to allow these species to pass by or forage around the project sites.

Because the project will be impacting such a small area (est. up to 100 sq. ft.) on the bank of the Cosumnes River, is unlikely to impact the bed of the Cosumnes River, and additional similar habitat is located elsewhere along the Cosumnes River, impacts to foraging and breeding habitat for these species would not be considered significant under CEQA.

Project-Related Mortality of Central Valley Steelhead, Central Valley Chinook Salmon (Fall-run), and Pacific Lamprey - Mitigation. Prior to the start of construction, the following mitigation measures will be completed by the applicant.

***Mitigation Measure 2a (Avoidance*).** The new diversion pipes shall be constructed when the river is at the lowest level (late summer). The new diversion intakes should be located above the low-water surface, such that in-water work does not occur. During construction, measures will be taken to prevent soil, debris, or any other objects from passing into the Cosumnes River should be taken (see measure 3.3.5).

Mitigation Measure 2b (Minimization). If in-water work is required an education training, preconstruction survey, and construction monitoring will be conducted. Prior to the start of construction, a qualified biologist will train all project staff regarding the sensitive fish species, their protection, penalties for non-compliance, and the project boundaries. Preconstruction surveys will be completed by a qualified biologist prior to in-water work. An exclusion device (i.e. silt fence, some type of screen, or a cofferdam) shall then be placed just outside of the construction area to prevent these species from entering the construction area. A qualified biologist will monitor all construction, including the installation of the exclusion device, within the exclusion area. If these species are detected prior to or during construction activities, the qualified biologist will capture and translocate any individuals that are discovered back into the river out of the work zone in the minimum amount of time necessary.

Mitigation Measure 2c (Fish Screens). For the purpose of the stated Project operations, if diversion intakes are to be operated for the Project February 15 through June, fish screens of appropriate size and mesh width will be constructed and fitted to the existing and new diversion intakes prior to February 15 by OHWD. The criteria for these fish screens will follow the National Marine Fisheries Service's (NMFS) *Fish Screening Criteria for Anadromous Salmonids* (1997), the Fish Screen and Bypass Facilities section of the NMFS's *Anadromous Salmonid Passage Facility Design* (2011) or be coordinated with the NMFS.

Mitigation Measure 2d (Fish Screen Maintenance). Installed passive fish screens should be maintained appropriately such that the screen surface area remains free of debris. Alternatively, the installed fish screens may be fitted with brushes or other devices (i.e. airburst) that keep the screen free of debris (i.e. active screens) every five minutes.

Implementation of these measures will reduce potential impacts to the Central Valley steelhead, Central Valley Chinook salmon, and Pacific lamprey to a less than significant level under CEQA and ensure compliance with state and federal laws protecting these species. If in-water work is required, the project will likely be required to get take authorization from the NMFS in accordance with Section 7 or 10 of the Endangered Species Act.

Project-Related Mortality to Western Pond Turtles - Potential Impact. Western pond turtles are known to occur within the vicinity of the project sites and have been found in areas connected to lower reaches of the Cosumnes River. Individual turtles may enter the project sites during construction and be vulnerable to mortality should they seek cover in or under parked equipment or move through the site while trucks or heavy equipment are being operated. Project-related mortality of western pond turtles is therefore considered a potentially significant adverse environmental impact of the project.

Project-Related Mortality to Western Pond Turtles - Mitigation. The following measures will be implemented during or prior to the start of project activities at the project sites.

***Mitigation Measure 3a* (*Pre-construction Survey*).** A qualified biologist will conduct a pre-construction survey for the western pond turtle in the riparian and aquatic habitat of the project sites within 15 days of the onset of construction in these areas. The information collected from this pre-construction survey will serve primarily to alert the biologist and construction crews of the general level of western pond turtle activity at the sites.

Mitigation Measure 3b (Monitoring and Avoidance). The construction crew will inspect the work area each day prior to the start of work. If any western pond turtles are observed, they will be avoided and allowed to passively leave the site prior to the initiation of construction.

***Mitigation Measure 3c (Relocation*).** Should any western pond turtles be observed during the pre-construction surveys or monitoring, and they do not leave the site on their own, a qualified biologist may relocate the turtle(s) 500 feet up- or downstream from the project.

Implementation of Mitigation Measures 3a-c will reduce potential project impacts to the western pond turtle to a less than significant level and will ensure that the project remains in compliance with state laws protecting this species.

Project-Related Mortality/Disturbance of Nesting Raptors and Migratory Birds (Including Swainson's Hawk, White-tailed Kite, Northern Harrier, Grasshopper Sparrow, and Loggerhead Shrike) - Potential Impacts. The project sites contain habitat that could be used for nesting by one or more avian species protected by the federal Migratory Bird Treaty Act and related state laws. Various birds could nest in the trees in the vineyard, managed fallow field, or riparian habitats. The larger trees could be used for nesting by a number of avian species, including the special-status Swainson's hawk, white-tailed kite, and loggerhead shrike. Killdeers may nest on bare ground on the roads of the three sites, and northern harriers and grasshopper sparrows may nest in the weedy areas of the managed fallow field. Raptors and migratory birds nesting within the project sites at the time of construction have the potential to be injured or killed by project activities. In addition to direct "take" of nesting birds, project construction activities could disturb birds nesting within or adjacent to work areas such that they would abandon their nests. Project construction activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitute a violation of state and federal laws and are considered a potentially significant impact under CEQA.

If any raptors or migratory birds were to be nesting on the ground during diversion activities, the nests could be flooded, and any chicks or eggs contained within could be lost. However, because the diversions would be initiated during the winter months, it is expected that the project sites will already be flooded in February and March, when birds in the project vicinity typically begin courtship behavior and start seeking out nesting locations. It is therefore considered unlikely that birds will nest in portions of the sites subject to flooding and be vulnerable to flooding themselves. While the flooded fields during the beginning of the nesting season may temporarily remove some nesting habitat for these species, large swaths of other similar and suitable habitats occur within the vicinity of the sites. Furthermore, the site can still be used for nesting lair in the season. For these reasons, loss of nesting habitat would not be considered a potentially significant impact under CEQA.

Project-Related Mortality/Disturbance of Nesting Raptors and Migratory Birds (Including Swainson's Hawk, White-tailed Kite, Northern Harrier, Grasshopper Sparrow, and Loggerhead Shrike) - Mitigation. The following measures will be implemented prior to the start of construction.

> ***Mitigation Measure 4a* (*Avoidance*).** In order to avoid impacts to nesting raptors and migratory birds, the project will be constructed, if feasible, outside the nesting season, or between September 1st and January 31st.
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> ***Mitigation Measure 4b (Preconstruction Surveys).*** If construction activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days prior to the start of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet, where accessible, for all nesting raptors and migratory birds, with the exception of Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.
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> ***Mitigation Measure 4c (Establish Buffers).*** Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.

Implementation of the above measures will reduce potential project impacts to nesting raptors and migratory birds to a less than significant level and will ensure compliance with state and federal laws protecting these species.

Degradation of Water Quality in Seasonal Drainages, Stock Ponds, and Downstream Waters - Potential Impacts. Trenching and other ground disturbance often leaves the soils of construction zones barren of vegetation and, therefore, vulnerable to erosion. Eroded soil is generally carried as sediment in surface runoff to be deposited in natural creek beds, canals, and adjacent wetlands. Furthermore, runoff is often polluted with grease, oil, pesticide and herbicide residues, heavy metals, etc. Water quality in the only hydrologic feature found on the project site, the Cosumnes River, could be significantly impacted by work in or around the river. Degradation of water quality in the river is considered a potentially significant impact of the project under CEQA.

Degradation of Water Quality in Seasonal Drainages, Stock Ponds, and Downstream Waters - Mitigation. Prior to the start of construction, the Applicant will implement the following mitigation measures.

> ***Mitigation Measure 5 (Erosion and Sediment Control).*** It is likely the RWQCB will include various Best Management Practices (BMPs) to control erosion and sedimentation of downstream waters (see Mitigation Measure 3.4.8); however, at a minimum the following BMPs shall be implemented:
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> 1) Protection of exposed graded slopes from sheet, rill and gully erosion. Such protection could be in the form of erosion control fabric, hydromulch containing the seed of native soil-binding plants, straw mechanically imbedded in exposed soils, or some combination of the three.
> 2) Protection of natural drainage channels from sedimentation. Straw bale check dams, waddles, or other another method of protection should be installed below graded areas so that any sediment carried by surface runoff is intercepted and retained before it can enter the Cosumnes River.

3) Use of BMPs to control soil erosion and non-point source pollution. BMPs may include measures in 1 and 2 above, and may include any number of additional measures appropriate for this particular site and this particular project, including, but not-limited to, grease traps in staging areas, regular site inspections for pollutants that could be carried by runoff into natural drainages, etc.

Implementation of the above measure will reduce potential project impacts to downstream water quality to a less than significant level under CEQA.

Project Impacts to Northern California Black Walnut Trees, Oak Trees, Native Trees, and Natural Communities of Special Concern - Potential Impact. As discussed, walnut trees were observed within the riparian habitat of the site and could be northern California black walnut, which is a native species listed as rare by the CNPS. In addition, as discussed in Section 2.8, riparian habitat of the site is considered a natural community of special concern, and as discussed in Section 3.2.1, the Conservation Element of the Sacramento County General Plan protects oak and other native trees. Therefore, the removal of northern California black walnut trees, native or riparian trees and vegetation, and oak trees during project construction would constitute a potentially significant adverse environmental impact.

Project Impacts to Northern California Black Walnut Trees, Oak Trees, Native Trees, and Natural Communities of Special Concern - Mitigation. Implementation of the following measures would reduce impacts to northern California black walnut trees, riparian trees and vegetation, and oak trees to a less than significant level.

Mitigation 6a (avoidance). Wherever possible, project activities will avoid the removal of all walnut trees, riparian trees, and oak trees.

Mitigation 6b (compensation). If the removal of walnut, riparian, oak or other native trees within the project sites cannot be avoided, then the applicant will provide compensatory mitigation in the form of in-kind plantings at a ratio of one to one, diameter at breast height (DBH). These plantings would be made inside an area suitable for each species. The plantings will be obtained from a local native plant nursery. Restoration would be implemented according to a plan prepared by a qualified biologist or arborist. This plan will define the objectives of the restoration effort, specify the species to be planted, describe the planting techniques, identify the maintenance activities during the establishment period, and specify a monitoring program that ensures that the restoration effort has met the restoration goals. Monitoring will be for a period of 5 years. If the project is not capable of supporting all of the required replacement trees, a sum equivalent to the replacement cost of the number of trees that cannot be accommodated may be paid to Sacramento County's Tree Preservation Fund or another appropriate tree preservation fund.

Implementation of the above mitigations will reduce impacts to northern California black walnut trees, oak trees, and riparian habitat to a less than significant level.

3.4.3.2 IV-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?

IV-c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

b) and c) Less than Significant Impact with Mitigation Incorporated.

Project Impacts to Potential Waters of the United States - Potential Impacts. The Cosumnes River below ordinary high water is a federally protected water of the United States, as defined by Section 404 of the Clean Water Act, and subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). Work below ordinary high water for construction of the two new intake structures will result in impacts up to approximately 100 square feet of such waters, most of which would likely be temporary impacts. This project action, when accompanied by the implementation of the mitigation measures proposed above, will have little effect on the native plant and animal resources using the project site. Given that the project will result in a minor loss of waters of the United States, project impacts are considered to be less than significant.

However, any construction related impacts below ordinary high water is regulated by the USACE, and the OHWD must seek and obtain a Department of the Army (DA) permit for the discharge of fill into a water of the United States from the USACE to remain in compliance with provisions of Section 404 of the Clean Water Act. The project must also seek and obtain a California Water Quality Certification from the RWQCB to be in compliance with Section 401 of the Clean Water Act. Finally, the project must enter into a Streambed Alteration Agreement with the CDFW to remain in compliance with provisions of Section 1602 of California Fish and Game Code. The DA permit issued by the USACE, the state water quality certification issued by the RWQCB, and the Streambed Alteration Agreement issued by the CDFW will all have conditions involving the avoidance and minimization of impact. A wetland delineation will likely be required, which will need to be submitted to the USACE for verification before a Clean Water Act Permit can be issued.

The project will also likely require an encroachment permit from the Central Valley Flood Protection Board for impacts to the bank of the Cosumnes River. Should the project propose to impact the bed of the Cosumnes River, a California State Lands Commission lease would also be required.

The proposed action will not result in a potentially significant adverse effect on waters of the United States as defined by Section 404 of the Clean Water Act and waters of the State of California as defined by California Water Code and California Fish and Game Code and no mitigation measures are warranted.

The project will be required to obtain a DA permit issued by the USACE, the state water quality certification issued by the RWQCB, and a Streambed Alteration Agreement issued by the CDFW. An encroachment permit from the Central Valley Flood Protection Board would also likely be required. If the project proposes to impact the bed of the Cosumnes River, a California State Lands Commission lease will be required. These permits/agreements/leases will have conditions that the project must comply with.

3.4.3.3 IV-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?

d) Less Than Significant Impact. Portions of the project sites likely function as wildlife movement corridors. Construction-related disturbance may temporarily disrupt movement along these corridors. However, after construction, movement corridors within the sites will function normally when diversion

activities are not occurring, and during flooded periods will still permit passage by terrestrial wildlife in dry higher ground areas. The project will have no permanent effects on the wildlife movement corridors associated with the Cosumnes River or Deer Creek. The project will have no effect on the Pacific flyway; birds using the flyway will continue to do so during and following project development. Project impacts to wildlife movement corridors are therefore considered less than significant under CEQA and no mitigation is therefore needed.

The project sites contain limited habitat for colonial breeders, in the form of large trees that could be used by roosting bats. Because no large trees are expected to be removed, the project will have no effect on bat maternity roosts or other native wildlife nursery sites and no mitigation is therefore needed.

3.4.3.4 IV-e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

3.4.3.5 IV-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?

e) and f) Less Than Significant Impact with Mitigation Incorporation. By implementing the mitigation measures proposed in this document, the proposed project would be consistent with the goals and policies of the County of Sacramento General Plan. The project will not result in significant habitat loss for any special status species; therefore, mitigation pursuant to General Plan Policy CO-59 is not required. No oak trees are proposed for removal under current project design. Any other riparian impacts will be mitigated to levels consistent with General Plan Policies CO-139 and CO-140 as provided for in Mitigation Measure 6a and b. General Plan Policy CO-128 requires fish screens on diversion pumps; these are provided in Mitigation Measure 2a of this document.

No known implemented Habitat Conservation Plans or Natural Community Conservation Plans are in effect for the area

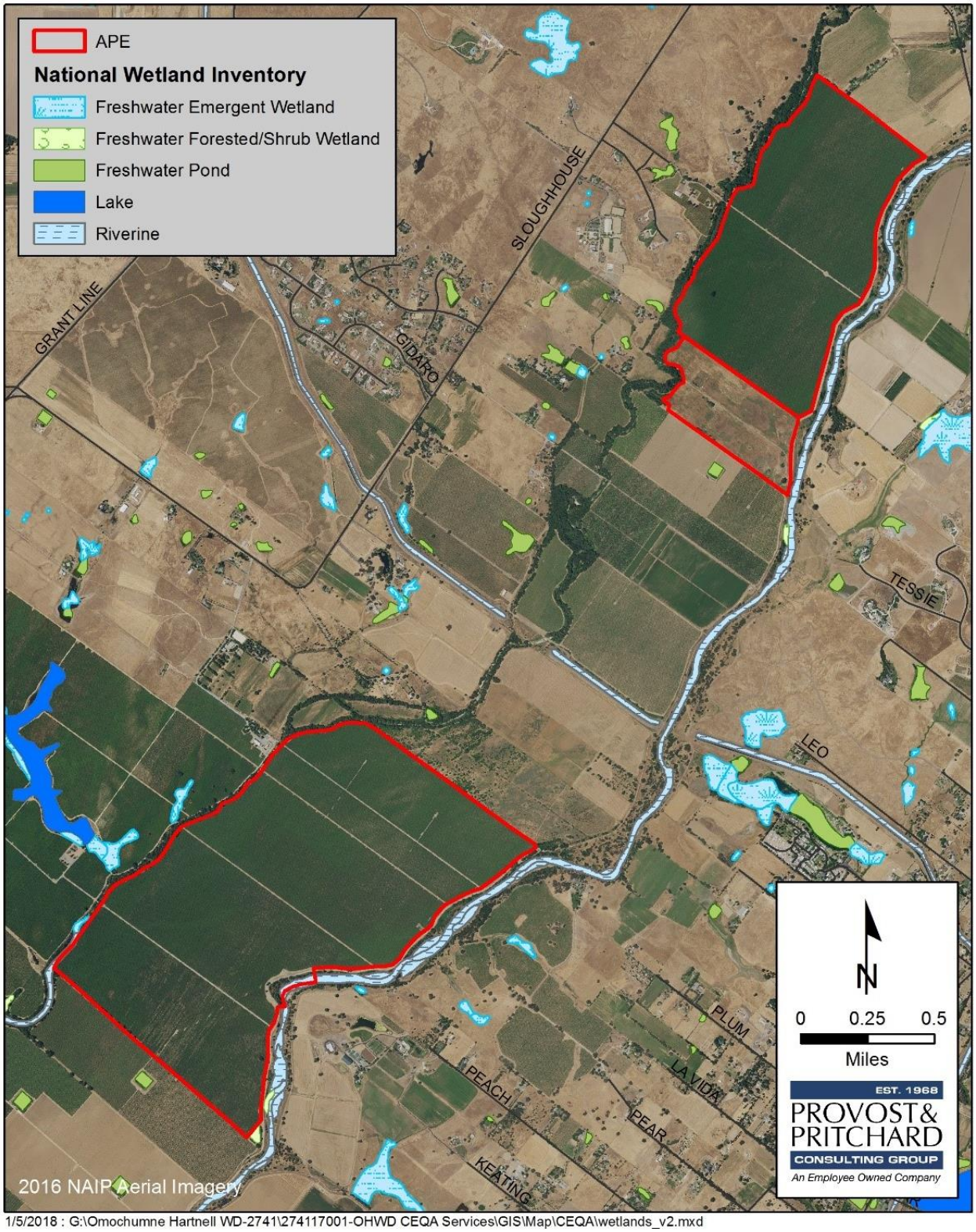

Figure 3-4. National Wetland Inventory Map

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3.5 Cultural Resources

Table 3-8. Cultural Resources

Cultural Resources					
Would the project:		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☒	☐	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d)	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

3.5.1 Environmental Setting

The Project site is situated adjacent to the northwest toe of the levee adjacent to the northwest side of the Cosumnes River, south of the unincorporated community of Sloughhouse, in Sacramento County, California. The proposed Project is located on the valley floor near the western flank of the north-central Sierra Nevada foothills at an average elevation of approximately 90-feet above mean sea level. The property is located a short distance south of Sloughhouse and is surrounded by agricultural development and very low density residential development. Multiple stream courses, including the Cosumnes River which is located adjacent to the southeast side of the present area of potential effect (APE)[14], are located within the general project vicinity. Terrain consists primarily of heavily disturbed lands which slope gently to the south.

Records Search

Prior to conducting the pedestrian field survey, the official Sacramento County archaeological records maintained by the North Central Information Center were examined for any existing recorded prehistoric or historic sites (NCIC File No.: SAC-17-208, dated December 12, 2017). Existing records at the NCIC document that the APE had not been subjected to previous archaeological investigation, and that no prehistoric or historic-era resources have been documented within the APE; however, seven (7) resources have been documented within the ¼-mile search radius.

Pedestrian Survey

All of the approximately 15,000-foot linear corridor APE was subjected to intensive pedestrian survey by means of walking two parallel transects spaced at between 5-meter and 10-meter intervals.

[14] According to the Archaeological Inventory Survey report, the Area of Potential Effects(APE) consists of the three separate agricultural parcels within which groundwater recharge is proposed.

In searching for cultural resources, the surveyor took into account the results of background research and was alert for any unusual contours, soil changes, distinctive vegetation patterns, exotic materials, artifacts, feature or feature remnants and other possible markers of cultural sites.
Field work was undertaken on January 21, 2018 and a subsequent written Archaeological Inventory Survey report was prepared by Sean Michael Jensen, M.A. with the Genesis Society, providing Archaeological, Historical and Cultural Resource Management Services. Mr. Jensen is a professional archaeologist and professional historian, with 31 years of experience in archaeology and history, who meets the Secretary of Interior's Standards for Professional Qualification, as demonstrated in his listing on the California Historical Resources Information System list of qualified archaeologists and historians. No archaeological or cultural resources were found during the survey.

3.5.2 Regulatory Setting

3.5.2.1 Federal

This Project is not subject to any Federal regulations associated with Cultural Resources.

3.5.2.2 State

The proposed Project is subject to CEQA which requires public or private projects financed or approved by public agencies to assess their effects on historical resources. CEQA uses the term "historical resources" to include buildings, sites, structures, objects or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance. CEQA states that if implementation of a project results in significant effects on historical resources, then alternative plans or mitigation measures must be considered; however, only significant historical resources need to be addressed (CCR 15064.5, 15126.4). For the purposes of this CEQA document, a significant impact would occur if project implementation:

- Causes a substantial change in the significance of a historical resource
- Causes a substantial adverse change in the significance of an archaeological resource
- Disturbs any human remains, including those interred outside of formal cemeteries

Therefore, before impacts and mitigation measures can be identified, the significance of historical resources must be determined. CEQA guidelines define three ways that a property may qualify as a historical resource for the purposes of CEQA review:

- If the resource is listed in or determined eligible for listing in the California Register of Historical Resources (CRHR)
- If the resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in an historical resource survey meeting the requirements of Section 5024.1(g) of the PRC unless the preponderance of evidence demonstrates that it is not historically or culturally significant
- The lead agency determines the resource to be significant as supported by substantial evidence in light of the whole record (CCR, Title 14, Division 6, Chapter 3, Section 15064.5(a))

Each of these ways of qualifying as a historical resource for the purpose of CEQA is related to the eligibility criteria for inclusion in the CRHR (PRC 5020.1(k), 5024.1, 5024.1(g)).

A historical resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
- Is associated with the lives of persons important in our past

- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
- Has yielded, or may be likely to yield, information important in prehistory or history Properties that area listed in or eligible for listing in the National Register of Historic Places are considered eligible for listing in the CRHR, and thus are significant historical resources for the purpose of CEQA (PRC Section 5024.1(d)(1)).

California Health and Safety Code: Section 7050.5 of the California Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the County coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the California Native American Heritage Commission. (Public Resources Code Section 5097.98 specifies the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials is within the jurisdiction of the Native American Heritage Commission.

Paleontological Resources: Paleontological resources are the fossilized remains of plants and animals and associated deposits. The Society of Vertebrate Paleontology has identified vertebrate fossils, their taphonomic and associated environmental indicators, and fossiliferous deposits as significant nonrenewable paleontological resources. Botanical and invertebrate fossils and assemblages may also be considered significant resources[15]. CEQA requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature (CEQA Appendix G(v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) Section 15126.4 (a)(1)). California Public Resources Code Section 5097.5 (see above) also applies to paleontological resources.

3.5.2.3 Local

Sacramento County General Plan: The Sacramento County Conservation Element contains policies related to cultural resources. The policies that are relevant to the protection of cultural resources within the Project site and surrounding area are as follows:

CO-152. Consultations with Native American tribes shall be handled with confidentiality and respect regarding sensitive cultural resources on traditional tribal lands.

CO-163. Require that a certified geologist or paleoresources consultant determine appropriate protection measures when resources are discovered during the course of development and land altering activities.

CO-150. Utilize local, state and national resources, such as the NCIC, to assist in determining the need for a cultural resources survey during project review.

[15] Society of Vertebrate Paleontology. Conformable Impact Mitigation Guidelines Committee Policy Statements. http://www.vertpaleo.org/ConformableImpactMitigationGuidelinesCommittee.htm.

3.5.3 Impact Assessment

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

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

3.5.3.3 V-c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

a-c) Less than Significant Impact with Mitigation Incorporated.
Existing records at the NCIC document that the APE had not been subjected to previous archaeological investigation, and that no prehistoric or historic-era resources have been documented within APE; however, seven (7) resources have been documented within a ¼ mile radius. The intensive pedestrian survey of the APE failed to identify any prehistoric or historic-era cultural resources. No significant historical resources/unique archaeological resources/historic properties are present within the Project area and no historical resources/unique archaeological resources will be affected by the undertaking, as presently proposed.

Despite these negative findings, the following mitigation measure will be incorporated to prevent any impacts to cultural resources:

Mitigation Measure CUL-1
Consultation in the event of inadvertent discovery of cultural material: The present evaluation and recommendations are based on the findings of an inventory-level surface survey only. There is always the possibility that significant unidentified cultural materials could be encountered on or below the surface during the course of future development or construction activities. This caveat is particularly relevant considering the constraints generally to archaeological field survey, and particularly where substantial ground disturbance has occurred, as in the present case. In the event of an inadvertent discovery of previously unidentified cultural material, archaeological consultation should be sought immediately.

3.5.3.4 V-d) Disturb any human remains, including those interred outside of dedicated cemeteries?

d) Less than Significant Impact with Mitigation. No formal cemeteries or other places of human internment are known to exist on the Project site; however, in accordance with Health and Safety Code Section 7050.5 and Public Resource Code Section 5097.98, if human remains are uncovered, Mitigation Measure CUL-2 would be implemented.

Mitigation Measure CUL-2
Consultation in the event of inadvertent discovery of human remains: Evidence of human burial or scattered human remains related to prehistoric occupation of the area could be inadvertently encountered anywhere within the project area during future construction activity or other actions involving disturbance to the ground surface and subsurface components. In the event of such an inadvertent discovery, the County Coroner would have to be informed and consulted, per State law. Ultimately, the goal of consultation is to establish an agreement between the most likely lineal descendant designated by the Native American Heritage Commission and the project proponent(s) with regard to a plan for treatment and disposition of any human remains and artifacts which might be found in association. Such treatment and disposition may require reburial of any identified human remains/burials within a "preserve" or other designated portion of the development property not subject to ground disturbing impacts.

3.6 Geology and Soils

Table 3-9. Geology and Soils

Geology and Soils				
Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	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.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Chapter 18 the most recently adopted California Building Standards Code creating substantial risks to life or property?	☐	☐	☒	☐
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 wastewater?	☐	☐	☐	☒

3.6.1 Environmental Setting

3.6.1.1 Geology and Soils

The proposed Project is located in central Sacramento County, more specifically in the Sacramento Valley physiographic region. The topography of the region ranges from flat to gently rolling and elevation ranges from sea level to approximately 400 feet above mean sea level. Sacramento Valley soils are developed almost exclusively from river and lake basin deposits on various geomorphic surfaces. The soils have been significantly altered by human activities, generally due to cultivation and urban development in recent years and historic gold dredging, hydraulic mining, drainage system development, creation of levees and cut and fill.

Soils in Sacramento County are characterized by low expansiveness properties, low landside potential and moderate erosional properties[16].

3.6.1.2 Faults and Seismicity

The proposed Project site is not located within an Alquist-Priolo Earthquake Fault Zone and no known faults cut through the local soil at the site. The nearest mapped major fault is the Midland Fault, located approximately 24 miles west of the proposed Project site, and is considered inactive. A smaller, concealed, unnamed fault zone is approximately 8 miles northwest of the site. The nearest named fault is the Ione Fault, located 15 miles southeast of the proposed Project.

3.6.1.3 Liquefaction

The potential for liquefaction, which is the loss of soil strength due to seismic forces, is dependent on soil types and density, the groundwater table, and the duration and intensity of ground shaking. Two areas within Sacramento County are susceptible to liquefaction: the downtown core of the City of Sacramento and the Delta area. Both of which do not include the Project area[17].

3.6.1.4 Soil Subsidence

Subsidence occurs when a large land area settles due to over-saturation or extensive withdrawal of ground water, oil, or natural gas. These areas are typically composed of open-textured soils that become saturated. These areas are high in silt or clay content. The proposed Project site is dominated by silt loam and sandy loam soils. However, the Sacramento County Safety Element suggests the area has a medium to high risk of subsidence.

3.6.1.5 Dam and Levee Failure

The proposed Project is not located within a dam failure or flood area inundation zone.

3.6.2 Regulatory Setting

3.6.2.1 Federal

No federal policies regarding geology and soils are applicable to the proposed project.

3.6.2.2 State

California Alquist-Priolo Earthquake Fault Zoning Act: The Alquist-Priolo Earthquake Fault Zoning Act (originally enacted in 1972 and renamed in 1994) is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The statute prohibits the location of most types of structures intended for human occupancy across the traces of active faults and regulates construction in the corridors along active faults.

[16] Zone 40 Water Supply Master Plan EIR. 2002. Sacramento County Water Agency. http://www.waterresources.saccounty.net/Zone%2040/Z40%20Sect%204.9%20Geology.pdf Site accessed 12 December 2017.
[17] Zone 40 Water Supply Master Plan EIR. 2002. Sacramento County Water Agency. http://www.waterresources.saccounty.net/Zone%2040/Z40%20Sect%204.9%20Geology.pdf Site accessed 12 December 2017.

California Seismic Hazards Mapping Act: The Seismic Hazards Mapping Act is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Earthquake Fault Zoning Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including ground shaking, liquefaction, and seismically induced landslides. The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones.

California Building Standards Code: The California Code of Regulations (CCR) Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The California Building Standards Code incorporates by reference the International Building Code with necessary California amendments. The International Building Code is a widely adopted model building code in the United States published by the International Code Council (ICC). Much of the text within the California Building Code has been tailored for California earthquake conditions.

3.6.2.3 Local

The Sacramento County General Plan's Conservation Element contains policies and goals related to mineral resources; however, none apply to the proposed Project.

3.6.3 Impact Assessment

3.6.3.1 VI-a) Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

VI-a-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.

VI-a-ii) Strong seismic ground shaking?

a-i) and a-ii) Less Than Significant Impact. The nearest fault of any kind is an unnamed, concealed fault located approximately 8 miles northwest of the proposed Project. The nearest major fault, the Midland Fault, is located 24 miles west of the proposed Project. The proposed Project does not include housing. Operation of the Project would require as-needed maintenance employees on site; however, Project components would not exacerbate exposure of people to injury or death due to potential seismic events. Any impact would be less than significant.

The proposed Project site and its vicinity are located in an area traditionally characterized by relatively low seismic activity. The site is not located in an Alquist-Priolo Earthquake Fault Zone as established by the Alquist-Priolo Fault Zoning Act (Section 2622 of Chapter 7.5, Division 2 of the California Public Resources Code).

VI-a-iii) Seismic-related ground failure, including liquefaction?

a-iii) Less Than Significant Impact. Liquefaction occurs when loose, water-saturated sediments lose strength and fail during strong ground shaking. In general, liquefiable areas are generally confined to the Valley floors covered by Quaternary-age alluvial deposits, Holocene soil deposits, current river channels, and active wash deposits and their historic floodplains, marshes, and dry lakes. The proposed Project is not in a wetland area. Additionally, the Project would be in compliance with the relevant land use plans, because of this comprehensive body of construction requirements enforced by the County, and the goals and policies set

forth in the Sacramento County General Plan that would avoid or reduce the effect of seismic hazards, this impact would be less than significant.

VI-a-iv) Landslides?

a-iv) No Impact. As the proposed Project is located on the Valley floor, no major geologic landforms exist on or near the site that could result in a landslide event. There will be no impact.

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

b) Less Than Significant Impact. Earthmoving activities associated with the Project would include ground excavation, site grading associated with water spreading pipeline installation. These activities could expose soils to erosion processes and the extent of erosion would vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions. Dischargers whose projects disturb one (1) or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer (QSD). Since the proposed Project site has relatively flat terrain resulting in a low potential for soil erosion, and would comply with the SWRCB requirements, the impact would be less than significant.

3.6.3.3 VI-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?

c) Less Than Significant Impact. The proposed Project site and the immediate surrounding area do not have any substantial grade changes in the topography to the point where the proposed Project would expose people or structures to potential substantial adverse effects on, or offsite, such as landslides, lateral spreading, subsidence, liquefaction or collapse. Any impact would be less than significant.

3.6.3.4 VI -d) Be located on expansive soil, as defined in Table 18-1-B of the most recently adopted Uniform Building Code creating substantial risks to life or property?

d) Less Than Significant Impact. The soils within the Sacramento Valley region are characterized as having low expansiveness properties. The proposed basin project is not habitable and would not require building permits for any structures. Therefore, impacts would be less than significant.

3.6.3.5 VI-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?

e) No Impact. The proposed Project does not include waste water disposal systems; therefore, there will be no impact.

3.6.3.5.1 Greenhouse Gas Emissions

Table 3-10. Greenhouse Gas Emissions

Greenhouse Gas Emissions				
Would the project:	**Potentially Significant Impact**	**Less than Significant with Mitigation Incorporated**	**Less than Significant Impact**	**No Impact**
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

3.6.4 Methodology

An Air Quality and Greenhouse Gas Emissions Evaluation Report, **Appendix A**, was prepared in ~~December 2017~~ August 2018. The sections below detail the methodology of the report and its conclusions.

Short-Term Construction-Generated Emissions

Short-term construction emissions associated with the proposed Project were calculated using CalEEmod, Version 2016.3.2. Emissions' modeling was assumed to occur an approximate 2.5-month period. An estimated six to eight workers are scheduled to be on site during the workday. All excavated material will remain onsite. material will be exported. All remaining assumptions were based on the default parameters contained in the model. Modeling assumptions and output files are included in **Appendix A.**

Long-Term Operational Emissions

Long-term operational emissions associated with the proposed Project were calculated using CalEEmod, Version 2016.3.2. There will be no increase in staff as a result of the proposed Project, and all maintenance will be as-needed. All remaining assumptions were based on the default parameters contained in the model. Modeling assumptions and output files are included in **Appendix A.**

3.6.4.1 Thresholds of Significance

CEQA Guidelines Amendments became effective March 18, 2010. Included in the Amendments are revisions to the Appendix G Initial Study Checklist. In accordance with these Amendments, a project would be considered to have a significant impact to climate change if it would:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or,
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

In accordance with SMAQMD's CEQA Greenhouse Gas Guidance, proposed Projects would be determined to have a less-than-significant impact if they are under the thresholds for stationary and non-stationary source emissions of GHGs identified in **Table 3-11**[18].

[18] SMAQMD CEQA Guidance & Tools. Greenhouse Gas Emissions. http://www.airquality.org/LandUseTransportation/Documents/Ch6GHG%20FINAL12-2016.pdf Accessed 19 December 2017.

Table 3-11. SMAQMD CEQA Thresholds of Significance – Greenhouse Gases

SMAQMD Thresholds of Significance – Greenhouse Gases	
Threshold Criteria	Greenhouse Gas Emissions
	metric tons per year of CO_2 equivalent
Stationary Source Facilities	10,000
Operational Emissions (Non-Stationary Source Facilities)	1,100
Construction Emissions	1,100

3.6.5 Environmental Setting

The Earth's climate has been warming for the past century. It is believed that this warming trend is related to the release of certain gases into the atmosphere. Greenhouse gases (GHG) absorb infrared energy that would otherwise escape from the Earth. As the infrared energy is absorbed, the air surrounding the Earth is heated. An overall warming trend has been recorded since the late 19th century, with the most rapid warming occurring over the past two decades. The 10 warmest years of the last century all occurred within the last 15 years. It appears that the decade of the 1990s was the warmest in human history [NOAA 2010]. Human activities have been attributed to an increase in the atmospheric abundance of greenhouse gases. The following is a brief description of the most commonly recognized GHGs.

3.6.5.1 Greenhouse Gases

Commonly identified GHG emissions and sources include the following:

- Carbon dioxide (CO_2) is an odorless, colorless natural greenhouse gas. CO_2 is emitted from natural and anthropogenic sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic out gassing. Anthropogenic sources include the burning of coal, oil, natural gas, and wood.
- Methane (CH_4) is a flammable greenhouse gas. A natural source of methane is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain methane, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and ruminants such as cattle.
- Nitrous oxide (N_2O), also known as laughing gas, is a colorless greenhouse gas. Nitrous oxide is produced by microbial processes in soil and water, including those reactions that occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load.
- Water vapor is the most abundant, and variable greenhouse gas. It is not considered a pollutant; in the atmosphere, it maintains a climate necessary for life.
- Ozone (O_3) is known as a photochemical pollutant and is a greenhouse gas; however, unlike other greenhouse gases, ozone in the troposphere is relatively short-lived and, therefore, is not global in nature. Ozone is not emitted directly into the atmosphere but is formed by a complex series of chemical reactions between volatile organic compounds, nitrogen oxides, and sunlight.
- Aerosols are suspensions of particulate matter in a gas emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light.

- Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. CFCs destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol in 1987.
- Hydrofluorocarbons (HFCs) are synthetic chemicals that are used as a substitute for CFCs. Of all the greenhouse gases, HFCs are one of three groups (the other two are perfluorocarbons and sulfur hexafluoride) with the highest global warming potential. HFCs are human-made for applications such as air conditioners and refrigerants.
- Perfluorocarbons (PFCs) have stable molecular structures and do not break down through the chemical processes in the lower atmosphere; therefore, PFCs have long atmospheric lifetimes, between 10,000 and 50,000 years. The two main sources of PFCs are primary aluminum production and semiconductor manufacture.
- Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It has the highest global warming potential of any gas evaluated. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

3.6.5.2 Effects of Climate Change

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth, and what the effects of clouds will be in determining the rate at which the mean temperature will increase. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, air pollution episodes, and the consequence of these effects on the economy.

Emissions of GHGs contributing to global climate change are largely attributable to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. About three-quarters of human emissions of CO_2 to the global atmosphere during the past 20 years are due to fossil fuel burning. Atmospheric concentrations of CO_2, CH_4, and N_2O have increased 31 percent, 151 percent, and 17 percent respectively since the year 1750 (CEC 2008). GHG emissions are typically expressed in carbon dioxide-equivalents (CO_2e), based on the GHG's Global Warming Potential (GWP). The GWP is dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. For example, one ton of CH_4 has the same contribution to the greenhouse effect as approximately 21 tons of CO_2. Therefore, CH_4 is a much more potent GHG than CO_2.

3.6.6 Regulatory Setting

3.6.6.1 Federal

Although climate change and GHG reduction is a concern at the federal level; currently there are no regulations or legislation that have been enacted specifically addressing GHG emissions reductions and climate change at the project level that would be applicable to the proposed Project.

3.6.6.2 State

California Air Resources Board: The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act of 1988. Other ARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts, establishing California Ambient Air Quality Standards (CAAQS), which in many cases are more stringent than the NAAQS, and

setting emissions standards for new motor vehicles. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used.

California Clean Air Act: The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for ozone, CO, SO2, and NO2 by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

3.6.6.3 Local

Sacramento Area Council of Governments

Climate Adaptation Action Plan

The Sacramento Area Council of Governments (SACOG) 2016 updated to the 2035 Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS) includes a climate adaptation action plan providing an overview of climate vulnerabilities for the region and establishing strategies to help the region's transportation system adapt to climate change impacts[19].

Adaptation Strategies:

- Adopt integrated approaches: Incorporate climate change into existing processes and programs.
- Prioritize the most vulnerable: Help the people, places, and infrastructure that are most at risk.
- Use best-available science: Ground adaptation in scientific understanding.
- Build strong partnerships: Coordinate across multiple sectors, scales, and stakeholders.
- Apply risk-management methods and tools: Use risk-management tools to prioritize options for reducing vulnerability.
- Apply ecosystem-based approaches: Incorporate ecosystem resilience and protection of ecosystem services. • Maximize mutual benefits: Support other initiatives where possible, such as disaster preparedness or sustainable resource management.
- Continuously evaluate performance: Determine quantifiable goals and metrics and track progress, adjusting strategies as needed.

Future Efforts:

- Maintain and manage: Enhance maintenance and repair policies to improve severe event preparedness and response. Manage procedures for monitoring infrastructure and create/update emergency action plans.
- Strengthen and protect: Retrofit existing infrastructure and build new structures that better withstand extreme climate events.
- Enhance redundancy: Identify and create alternatives to vulnerable routes. Utilize different modes of transportation to enhance redundancy.

[19] Sacramento Area Council of Governments. Regional Plans. Metropolitan Transportation Plan/Sustainable Communities Plan. https://www.sacog.org/metropolitan-transportation-plansustainable-communities-strategy Accessed 19 December 2017.

- Retreat: Relocate or abandon infrastructure located in highly vulnerable areas. Avoid building new infrastructure in vulnerable locations.

SMAQMD CEQA Greenhouse Gas Guidance.

The Sacramento Metropolitan Air Quality Management District believes that GHG emissions are best analyzed and mitigated at the program-level; however, until more program-level GHG analyses have been performed in Sacramento County, the District offers the guidance contained in Chapter 6: Greenhouse Gas Emissions of the CEQA Guide, adopted in 2009, for addressing the GHG emissions.

Sacramento County General Plan

The Sacramento County General Plan – Air Quality Element includes the following objectives and policies that address air quality:

Policy AQ-22 Reduce greenhouse gas emissions from County operations as well as private development

3.6.7 Impact Assessment

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

a) Less Than Significant Impact.

Short-Term Construction-Generated Emissions

Estimated construction-generated emissions are summarized in **Table 3-12**. As indicated, construction of the proposed Project would generate maximum annual emissions of approximately ~~160.6~~ 121.20 metric tons of carbon dioxide equivalent ($MTCO_2e$). Construction-related production of GHGs would be temporary and last approximately ~~six~~ 2.5 months total.

Table 3-12. Unmitigated Short-Term Construction-Generated GHG Emissions

Short-Term Construction-Generated GHG Emissions	
Source	**Emissions (MT CO_2e)[1]**
2018 Est. Project Construction Emissions	~~160.6350~~ 121.1953
SMAQMD Threshold of Significance	*1,100*
Exceed SMAQMD Threshold?	*No*

1. *Emissions were quantified using the CalEEmod, Version 2016.3.1. Refer to* ***Appendix A*** *for modeling results and assumptions. Totals may not sum due to rounding.*

Long-Term Operational Emissions

Long-term operation of the proposed Project would result in GHG emissions related to infrequent worker trips. As demonstrated in **Table 3-13**, the CO_2 generated from the proposed Project is in compliance with the SMAQMD Thresholds of Significance for GHGs would have a less than significant impact on the environment.

Table 3-13. Unmitigated Long-Term Operation-Generated GHG Emissions

Long-Term Operation-Generated GHG Emissions	
Category	**Emissions (MT CO_2e)[1]**
Area	0.0331
Energy	~~2.5749~~ 0.0000
Mobile	0.0000
Waste & Water	0.0000
Total Proposed Project Emissions	***~~2.6080~~ 0.0331***
SMAQMD Threshold for Significance (Non-Stationary)	*1,100*
SMAQMD Threshold for Significance (Stationary)	*10,000*
Exceed Threshold?	*No*

1. *Emissions were quantified using the CalEEmod, Version 2016.3.1. Refer to* ***Appendix A*** *for modeling results and assumptions. Totals may not sum due to rounding.*

3.6.7.2 VII-b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

b) Less Than Significant Impact.

In accordance with SMAQMD's recommended guidance, project-generated GHG emissions would be considered less than significant if project emissions are less than the thresholds identified in **Table 3-11**.

As noted above in **Table 3-12** and **Table 3-13**, project-generated GHG emissions would be attributable to the consumption of fossil fuels associated with the operation of on- and off-road vehicles. The total modeled emissions do not exceed the SMAQMD threshold for significance; therefore, would be considered have a less than significant individual and cumulative impact on the environment.

Sacramento County is currently working on a Climate Action Plan – Communitywide Greenhouse Gas Reduction and Climate Change Adaptation (Communitywide CAP) Project. The Communitywide CAP will include strategies that will both (1) reduce greenhouse gas emissions that are causing climate change, and (2) help the community prepare for and adapt to the effects of climate change. Public participation and input is encouraged to ensure the Communitywide CAP reflects the needs of Sacramento County[20].

The proposed Project complies with the SMAQMD's GHG guidance and Sacramento County does not have an available final Climate Action Plan. For the stated reasons, implementation of the proposed Project is not anticipated to conflict with any applicable plan, policy or regulation for reducing the emissions of GHGs, nor will the proposed Project have a significant impact on the environment. The impact would be considered less than significant.

[20] Sacramento County. Climate Action Plan. http://www.per.saccounty.net/PlansandProjectsIn-Progress/Pages/CAP.aspx Accessed 19 December 2017.

3.7 Hazards and Hazardous Materials

Table 3-14. Hazards and Hazardous Materials

Hazards and Hazardous Materials					
	Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	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?	☐	☐	☒	☐
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?	☐	☐	☒	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
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?	☐	☐	☐	☒
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 for people residing or working in the project area?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h)	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?	☐	☐	☐	☒

3.7.1 Environmental Setting

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires the California Environmental Protection Agency (Cal/EPA) to develop at least annually an updated Cortese List. The Department of Toxic Substance Control (DTSC) is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List. DTSC's EnviroStor database provides DTSC's component of Cortese List data (DTSC, 2010). In addition to the Envirostor database, the State Water Resource Control Board

(SWRCB) Geotracker database provides information on regulated hazardous waste facilities in California, including underground storage tank (UST) cases and non-UST cleanup programs, including Spills-Leaks-Investigations-Cleanups (SLIC) sites, Department of Defense sites (DOD), and Land Disposal program.

A search of the SWRCB Geotracker performed on December 14, 2017, determined that there were no cleanup sites within 2 miles of the Project. A search of the DTSC EnviroStor database performed on December 14, 2017 additionally confirmed that no cleanup sites were located within 2-miles of the proposed Project.

The nearest school is Small Cloud Christian School, located 1.4 miles east of the southern portion of the Project. Cosumnes River Elementary is located 2.2 miles east of the northern portion of the Project.

The nearest private airport the Luchetti Ranch Airport, located 0.8 miles southeast of the southern portion of the Project. The private Rancho Murieta Airport is located 4.6 miles east of the northern portion of the Project. The nearest public/international airport is the Sacramento International Airport, located 24 miles northwest of the Project.

3.7.2 Regulatory Setting

3.7.2.1 Federal

U.S. Environmental Protection Agency: The U.S. Environmental Protection Agency (U.S. EPA) was established in 1970 to consolidate in one agency a variety of federal research, monitoring, standard-setting and enforcement activities to ensure environmental protection. U.S. EPA's mission is to protect human health and to safeguard the natural environment — air, water, and land — upon which life depends. U.S. EPA works to develop and enforce regulations that implement environmental laws enacted by Congress, is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes the responsibility for issuing permits and for monitoring and enforcing compliance. Where national standards are not met, U.S. EPA can issue sanctions and take other steps to assist the states and tribes in reaching the desired levels of environmental quality.

Toxic Substances Control Act/Resource Conservation and Recovery Act/Hazardous and Solid Waste Act: The Federal Toxic Substances Control Act (TSCA, 15 U.S.C. §2601 et seq., 1976) and the Resource Conservation and Recovery Act of 1976 (RCRA, CFR 239 through 282) established a program administered by the U.S. EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes.

Clean Water Act/SPCC Rule: The Clean Water Act (CWA) (33 U.S.C. Section 1251 et seq., formerly the Federal Water Pollution Control Act of 1972), was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. As part of the Clean Water Act, the U.S. EPA oversees and enforces the Oil Pollution Prevention regulation contained in Title 40 of the CFR, Part 112 (Title 40 CFR, Part 112). Often referred to as the "SPCC rule", the regulation describes the requirements for facilities to prepare, amend and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans. A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, or the total above ground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the "Navigable Waters" of the United States. Other federal regulations overseen by the U.S. EPA relevant to hazardous materials and environmental contamination include Title 40, CFR, Chapter 1, Subchapter D – Water Programs and Subchapter I – Solid Wastes. Title 40, CFR, Chapter 1, Subchapter D, Parts 116 and 117 designate hazardous substances under the Federal Water Pollution Control Act. Title 40, CFR, Part 116 sets forth a determination of the reportable quantity for each substance that is

designated as hazardous. Title 40, CFR, Part 117 applies to quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

3.7.2.2 State

California Environmental Protection Agency (CalEPA): The California Environmental Protection Agency (CalEPA) was created in 1991 by Governor's Executive Order. The six boards, departments, and office were placed under the CalEPA umbrella to create a cabinet-level voice for the protection of human health and the environment and to assure the coordinated deployment of State resources. The mission of CalEPA is to restore, protect, and enhance the environment to ensure public health, environmental quality, and economic vitality under Title 22 of the California Code of Regulations (CCR)[21]

Department of Toxic Substances Control (DTSC): DTSC is a department of Cal/EPA and is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code. Other laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Government Code Section 65962.5 (commonly referred to as the Cortese List) includes DTSC listed hazardous waste facilities and sites, DHS lists of contaminated drinking water wells, sites listed by the SWRCB as having UST leaks and which have had a discharge of hazardous wastes or materials into the water or groundwater, and lists from local regulatory agencies of sites that have had a known migration of hazardous waste/material.[22]

Unified Program: The Unified Program (codified CCR Title 27, Division 1, Subdivision 4, Chapter 1, Sections 15100- 15620) consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of the following six environmental and emergency response programs[23]:

- Hazardous Waste Generator (HWG) program and Hazardous Waste On-site Treatment activities;
- Aboveground Storage Tank (AST) program Spill Prevention Control and Countermeasure Plan requirements;
- Underground Storage Tank (UST) program;
- Hazardous Materials Release Response Plans and Inventory (HMRRP) program;
- California Accidental Release Prevention (CalARP) program;
- Hazardous Materials Management Plans and Hazardous Materials Inventory Statement (HMMP/HMIS) requirements.

The Secretary of CalEPA is directly responsible for coordinating the administration of the Unified Program. The Unified Program requires all counties to apply to the CalEPA Secretary for the certification of a local unified program agency. Qualified cities are also permitted to apply for certification. The local Certified Unified Program Agency (CUPA) is required to consolidate, coordinate, and make consistent the administrative requirements, permits, fee structures, and inspection and enforcement activities for these six program elements in the county. Most CUPAs have been established as a function of a local environmental health or fire department.

[21] California Environmental Protection Agency. http://www.calepa.ca.gov Accessed March 20, 2017.
[22] California Department of Toxic Substances Control. http://www.dtsc.ca.gov/ Accessed March 20, 2017.
[23] California Environmental Protection Agency. http://www.calepa.ca.gov/cupa/ Accessed March 20, 2017

Hazardous Waste Management Program: The Hazardous Waste Management Program (HWMP) regulates hazardous waste through its permitting, enforcement, and Unified Program activities in accordance with California Health and Safety Code Section 25135 et seq. The main focus of HWMP is to ensure the safe storage, treatment, transportation, and disposal of hazardous wastes.

State Water Resources Control Board (SWRCB or "State Board"): The State Water Resources Control Board (SWRCB) was created by the California legislature in 1967. The mission of SWRCB is to ensure the highest reasonable quality for waters of the State, while allocating those waters to achieve the optimum balance of beneficial uses. The joint authority of water allocation and water quality protection enables SWRCB to provide comprehensive protection for California's waters.

California Department of Industrial Relations – Division of Occupational Safety and Health (Cal OSHA): In California, every employer has a legal obligation to provide and maintain a safe and healthful workplace for employees, according to the California Occupational Safety and Health Act of 1973 (per Title 8 of the CCR). The Division of Occupational Safety and Health (Cal/OSHA) program is responsible for enforcing California laws and regulations pertaining to workplace safety and health and for providing assistance to employers and workers about workplace safety and health issues. Cal/OSHA regulations are administered through Title 8 of the CCR. The regulations require all manufacturers or importers to assess the hazards of substances that they produce or import and all employers to provide information to their employees about the hazardous substances to which they may be exposed.

3.7.2.3 Local

Sacramento County 2030 General Plan: The 2030 Sacramento County General Plan includes goals and policies related to environmental hazards and hazardous materials. The policies and goals that are pertinent to the Project are included below:

> *Policy HM-4*. The handling, storage, and transport of hazardous materials shall be conducted in a manner so as not to compromise public health and safety standards.
>
> *Policy HM-7*. Encourage the implementation of workplace safety programs and to the best extent possible ensure that residents who live adjacent to industrial or commercials facilities are protected from accidents and the mishandling of hazardous materials.
>
> *Policy HM-8*. Continue the effort to prevent ground water and soil contamination.
>
> *Policy HM-14*. Support local enforcement of hazardous materials regulations.

Sacramento County 2008 Evacuation Plan and Sacramento County 2008 All-Hazards Emergency Operations Plan: The purpose of the Evacuation Plan and All-Hazards Emergency Operations Plan is to document the agreed upon strategy for the County's response to emergencies that involve the evacuation of persons from an impacted area to a safe area and provides direction on how to respond to an emergency from the onset through an extended response, and into the recovery process. The Emergency Operations Plan establishes an Emergency Management Organization that assigns functions and tasks consistent with the California Standardized Emergency Management System and the National Incident Management System.

3.7.3 Impact Assessment

3.7.3.1 VIII-a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? and;

3.7.3.2 VIII-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?

a-b) Less Than Significant Impact. There are no designated hazardous materials transportation routes in the vicinity of the proposed Project site. Additionally, the Project does not propose any transport, use, or disposal of hazardous materials associated with the construction or operation, with the exception of diesel fuel for construction equipment. Any accidental hazardous materials spills during proposed Project construction would be the responsibility of the construction contractor to remediate according to industry best management practices and County requirements. Any impacts would therefore be less than significant.

3.7.3.3 VIII-c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

c) No Impact. The nearest school is Small Cloud Christian School, located 1.4 miles east of the southern portion of the Project. Cosumnes River Elementary is located 2.2 miles east of the northern portion of the Project. The proposed Project does not involve the transport of any hazardous materials and would not emit hazardous emissions within 1/4 mile of either school. There would be no impact.

3.7.3.4 VIII-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?

d) No Impact. The proposed Project does not involve land that is actively listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic Substances Control. A search of the SWRCB Geotracker performed on December 14, 2017 and a search of the DTSC EnviroStor database also performed on December 14, 2017 determined that no cleanup sites are within two miles of the proposed Project. There would be no impact.

3.7.3.5 VIII-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 for people residing or working in the project area?; and,

3.7.3.6 VIII-f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

e-f) No Impact. The private Luchetti Ranch Airport is located 0.8 miles southeast of the southern portion of the Project and the private Rancho Murieta Airport is located 4.6 miles east of the northern portion of the Project. The nearest international airport is the Sacramento International Airport, located 24 miles northwest of the Project. The Project does not entail any regular operational staff or residences and therefore does not exacerbate any hazards related to the operation of these nearby airports. There would be no impact.

3.7.3.7 VIII-g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

g) No Impact. The Project would not impede roadway access or provide additional physical barriers that would impede the Sacramento County Emergency Operations Plan or the Sacramento County Evacuation Plan. There would be no impact.

3.7.3.8 VIII-h) 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?

h) No Impact. The proposed Project site and immediately surrounding lands consist of actively cultivated agricultural lands and there are no wildlands on-site or adjacent to the site. The Project does not include any residential components, nor would it require any employees to be stationed permanently at the site on a daily basis. Maintenance will be limited to once weekly trips. There would be no impacts related to risks of wildland fires.

3.8 Hydrology and Water Quality

Table 3-15. Hydrology and Water Quality

Hydrology and Water Quality					
	Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐
e)	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?	☐	☐	☒	☐
f)	Otherwise substantially degrade water quality?	☐	☐	☒	☐
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☒	☐
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

3.8.1 Environmental Setting

The proposed Project is located in the ~~San Joaquin~~ Sacramento Valley Groundwater Basin's ~~Cosumnes~~ South American Subbasin. ~~The subbasin is defined by unconsolidated to semi-consolidated sedimentary deposits on the north and west by the Cosumnes River, on the south by the Mokelumne River, and by consolidated~~

~~bedrock of the Sierra Nevada Mountains on the east. The subbasin drains westward through three major rivers: Cosumnes, Dry Creek and the Mokelumne River[24].~~

The Cosumnes River will be used to convey surface water to the vineyards and fallowed fields for groundwater recharge associated with the proposed Project (**Figure 2-2**). The Cosumnes River is the largest undammed river flowing into the Central Valley of California.

The Project is located within the FEMA flood zone panels 06067C0375H and 060670335H which designates the proposed Project fields in 100-year flood zones.

3.8.2 Regulatory Setting

3.8.2.1 Federal

Clean Water Act: The Clean Water Act (CWA) is intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 CFR 1251). The regulations implementing the CWA protect waters of the U.S. including streams and wetlands (33 CFR 328.3). The CWA requires states to set standards to protect, maintain, and restore water quality by regulating point source and some non-point source discharges. Under Section 402 of the CWA, the National Pollutant Discharge Elimination System (NPDES) permit process was established to regulate these discharges (see Section 3.9.2.2 below for additional information on implementation of NPDES). Section 401 of the CWA provides States authority to ensure that federal agencies will not issue permits or licenses that violate water quality standards.

Federal Emergency Management Agency (FEMA) Flood Zones: The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps (FIRM) that can be used for planning purposes.

Flood hazard areas identified on the Flood Insurance Rate Map are identified as a Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood. SFHAs are labeled as Zone A, Zone AO, Zone AH, Zones A1-A30, Zone AE, Zone A99, Zone AR, Zone AR/AE, Zone AR/AO, Zone AR/A1-A30, Zone AR/A, Zone V, Zone VE, and Zones V1-V30. Moderate flood hazard areas, labeled Zone B or Zone X (shaded) are also shown on the FIRM, and are the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood. The areas of minimal flood hazard, which are the areas outside the SFHA and higher than the elevation of the 0.2-percent-annual-chance flood, are labeled Zone C or Zone X (un-shaded).

3.8.2.2 State

State Water Resources Control Board: The State Water Resources Control Board (SWRCB), located in Sacramento, is the agency with jurisdiction over water quality issues in the State of California and is the authorized local agency to administer water quality components of the Federal CWA (Section 401 notably). The SWRCB is governed by the Porter-Cologne Water Quality Act (Division 7 of the California Water Code), which established the legal framework for water quality control activities by the SWRCB. The intent of the Porter-Cologne Act is to regulate factors which may affect the quality of waters of the State to attain the highest quality which is reasonable, considering a full range of demands and values. Much of the implementation of the SWRCB's responsibilities is delegated to its nine Regional Boards. The Project site is located within the Central Valley Regional Water Quality Control Board.

[24] ~~San Joaquin Valley Groudnwater Basin. Cosumnes Subbasin. 2006. California's Groundwater Bulletin 118. http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/5-22.16.pdf Site accessed 12 December 2017.~~

The Central Valley Regional Water Quality Control Board (CVRWQCB) administers the NPDES storm water-permitting program in the Central Valley region. Construction activities on one acre or more are subject to the permitting requirements of the NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit). Additionally, CVRWQCB is responsible for issuing Waste Discharge Requirements Orders under California Water Code Section 13260, Article 4, Waste Discharge Requirements.

The SWRCB requires a Storm Water Pollution Prevention Plan (SWPPP) as a requirement of the National Pollution Discharge Elimination System that regulates water quality associated with construction or industrial activities.

State Department of Water Resources: California Water Code (Sections 10004 et seq.) requires that the State Department of Water Resources (DWR) update the California Water Plan every five years. The 2013 update is the most current review and contained the following conclusions:

- California's water supply and flood protection systems are composed of aging infrastructure and have been further weakened by insufficient maintenance in some areas.
- Flood risk has increased.
- California's changing and increasingly competing demands for water come from many sectors and are influences by population growth. The California Department of Finance projects that population will increase to 51 million by 2050.
- The state's environment and economy are becoming increasingly susceptible to the effects of reduced water-supply reliability.
- Thirty million Californians rely on groundwater for a portion of their drinking water. Many water users in the Central Valley, particularly in the San Joaquin Valley and Tulare Lake areas are turning to groundwater as surface supplies become less reliable, particularly surface water supplies delivered through the Delta. Land subsidence rates of up to 1 foot per year have been returned to some San Joaquin Valley localities heavily reliant on groundwater supplies. Additionally, several groundwater basins throughout California are contaminated with human-made or naturally occurring pollutants.

California Government Code 65302 (d): A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, river and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. That portion of the conservation element including waters shall be developed in coordination with any County-wide water agency and with all district and city agencies which have developed, served, controlled or conserved water for any purpose for the County or city for which the plan is prepared. Coordination shall include the discussion and evaluation of any water supply and demand information described in Section 65352.5, if that information has been submitted by the water agency to the city or County. The conservation element may also cover:

1. The reclamation of land and waters.
2. Prevention and control of the pollution of streams and other waters.
3. Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan.
4. Prevention, control, and correction of the erosion of soils, beaches, and shores.
5. Protection of watersheds.
6. The location, quantity and quality of the rock, sand and gravel resources.
7. Flood control.

Sustainable Groundwater Management Act: On September 16, 2014 Governor Edmund G. Brown Jr. signed three bills, SB 1168 (Pavley) SB 1319 (Pavley) and AB 1739 (Dickinson) which together comprise the Sustainable Groundwater Management Act, SGMA (commonly pronounced as "sigma"). The SGMA comprehensively reforms groundwater management in California. The Act requires the formation of local Groundwater Sustainability Agencies (GSAs) and grants these GSAs the authority and responsibility to

prepare, adopt and implement Groundwater Sustainability Plans. The Act took effect on January 1, 2015, and will be implemented over the course of next several years and decades.[25] SGMA provides that the state may intervene to manage basins when local agencies fail to take appropriate responsibility.

3.8.2.3 Local

Sacramento 2030 County General Plan: The County General Plan includes goals and policies related to water resources. The policies and goals that are pertinent to the Project are included below:

Policy CO-10. Support local watershed initiatives that enhance groundwater recharge.
Policy CO-11. Support local groundwater management efforts that are consistent with the WFA Groundwater Management Element.
Policy CO-22. Support water management practices that are responsive to the impacts of Global Climate Change such as groundwater banking and other water storage projects.
Policy CO-25. Support the preservation, restoration, and creation of riparian corridors, wetlands and buffer zones.
Policy CO-26. Protect areas susceptible to erosion, natural water bodies, and natural drainage systems.

3.8.3 Impact Assessment

3.8.3.1 IX-a) Violate any water quality standards or waste discharge requirements?

a) Less than Significant Impact. The State Water Resources Control Board requires a Stormwater Pollution Prevention Plan (SWPPP) as a requirement of the National Pollution Discharge Elimination System to be prepared for projects that disturb one (1) or more acres of soil. A SWPPP involves site planning and scheduling, limiting disturbed soil areas, and determining best management practices specific to project sites and construction conditions to minimize the risk of pollution and sediments being discharged. Implementation of the SWPPP will minimize the potential for the proposed Project to alter the existing drainage pattern in a manner that will result in substantial erosion or adverse siltation onsite or offsite. Additionally, a SWPPP will assure there can be no construction-related discharge to any surface water source. For the operational phase of the proposed Project there will be percolation discharge of Cosumnes River water to groundwater, meaning quality surface water is filtered through the soil prior to entering the saturated zone. but this process is not required to be regulated by the SWPPP process. The recovered water from the groundwater basin will be monitored for water quality maximum contaminant loading and other water quality criteria for agricultural uses via the proposed monitoring well. The source water from the Cosumnes River experiences impairment regarding pathogens, invasive exotic species and sediment toxicity[26]. All of which are issues more typically associated with surface water and would experience mitigation as the water is recharged to the aquifer. The proposed Project will not violate any water quality standards and will not impact waste discharge requirements. The impact will be less than significant.

3.8.3.2 IX-b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to

[25] California Drought. Update September 16, 2014. http://ca.gov/drought/topstory/top-story-13.html Accessed 8 January 2018.
[26] Waterbody Quality Assessment Report. Cosumnes River, Lower. EPA. https://iaspub.epa.gov/tmdl_waters10/attains_waterbody.control?p_list_id=CAR5311100020080909191017&p_cycle=2012&p_state=CA&p_report_type=T Accessed 22 January 2018.

a level which would not support existing land uses or planned uses for which permits have been granted)?

b) Less than Significant Impact. The purpose of the proposed Project is to restore, not deplete groundwater supplies and to facilitate recharge rather than interfere with it. Therefore, there will be a net increase in aquifer volume and a rising of local groundwater table levels from the capture of available surface water from the Cosumnes River. The proposed Project is expected, therefore, to result in the need for decreased pumping efforts to meet current district user needs. Therefore, there will be no impacts.

3.8.3.3 IX-c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

3.8.3.4 IX-d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

3.8.3.5 IX-e) 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?

c-e) Less Than Significant Impact. The proposed Project will improve groundwater storage and prevent exceedances of stormwater drainage systems or additional polluted runoff by providing a diversional recharge space for surface water. The proposed Project construction is also required to comply with requirements of SWPPP (see discussion above in Section IX-a). The project will not substantially alter the course of the flow of a stream or river in which substantial erosion or siltation could occur. Therefore, impacts will be less than significant.

3.8.3.6 IX-f) Otherwise substantially degrade water quality?

f) Less Than Significant Impact. Any impacts to water quality have been discussed in the impact analysis for Impact IX-a) with discussion of SWPPP implementation. The impact will be less than significant.

3.8.3.7 IX-g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? and,

IX-h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

g-h) No Impact. The proposed Project overlaps the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) Flood Insurance Rate Map (FIRM) Panels 06067C0375H and 060670335H. See **Figure 3-5. FEMA Flood Map**. The proposed Project would not involve the construction of any housing or facilities that would unintentionally redirect flood flows. All impacts would be considered less than significant.

3.8.3.8 IX-i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam? and,

3.8.3.9 IX-j) Inundation by seiche, tsunami, or mudflow?

i-j) Less Than Significant Impact. The Project is isolated from opportunities for seiche, tsunami and mudflow. The proposed Project will be providing alleviation of excessive flood waters to adjacent areas by providing a diversion outlet when available. There will be no regular employees on site and no housing will result from project implementation. Therefore, there will be a less than significant impact.

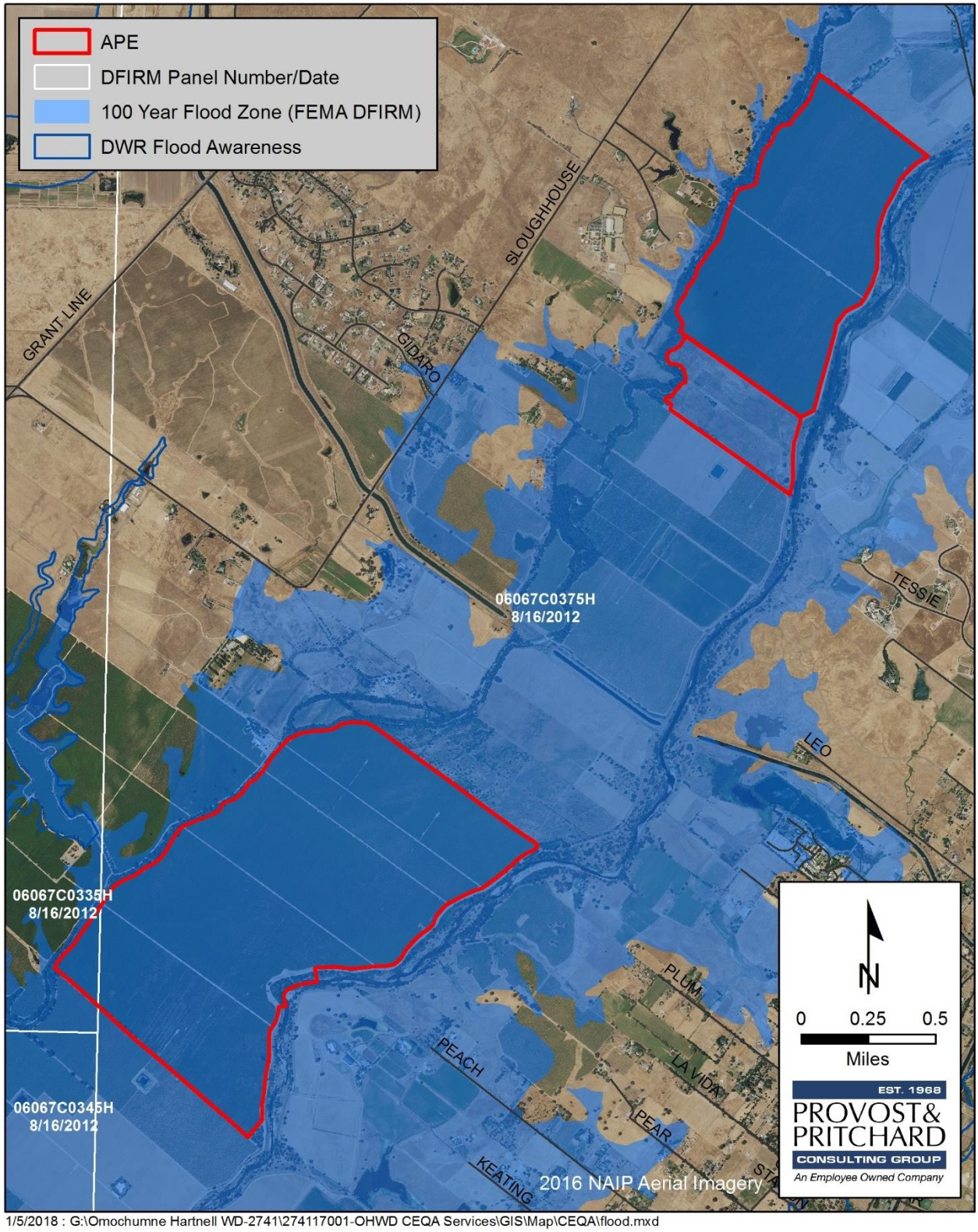

Figure 3-5. FEMA Flood Map

3.9 Land Use and Planning

Table 3-16. Land Use and Planning

Land Use and Planning					
	Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

3.9.1 Environmental Setting

3.9.1.1 Existing Land Uses

The proposed Project area is mapped by the Department of Conservation, Farmland Mapping and Monitoring Program (FMMP) primarily as Farmland of Local Importance and Prime Farmland.

The proposed Project site consists of agricultural land. Land uses surrounding the site are agricultural and scattered rural residential homes. Although riparian treelines are within the general vicinity, no timber land is present at the Project site or in the Project vicinity.

3.9.1.1.1 General Plan Designations and Zone Districts

3.9.1.1.2 On-site General Plan and Zoning

The proposed Project site is designated as agricultural by the General Plan with the implementing zone districts as Agricultural 40-acre minimum parcel size (AG-40) and Agricultural, 80-acre minimum parcel size (AG-80). See **Figure 3-6 Zoning Map**.

3.9.1.1.3 Surrounding General Plan and Zoning

Lands surrounding the proposed Project are designated for agricultural and natural preserve land use(s)with corresponding zone districts as AG-40, AG-80, agriculture 5-acre minimum parcel size (AR-5) and agriculture 20-acre minimum parcel size (AG-20), respectively (again spell out what AR-5 and AG-20 mean. Alternately, you could provide table showing the GP land use designations and the range of implementing zone districts for each by the Zoning Ordinance.

3.9.2 Regulatory Setting

3.9.2.1 Federal

3.9.2.2 State

There are no federal or state land use regulations applicable to this Project.

3.9.2.3 Local

Sacramento County 2030 General Plan

> *Policy AG-8.* Agricultural zoning district boundaries shall be rational and shall respect parcel boundaries.
>
> *Policy AG-9.* Agricultural land divisions shall not adversely affect the integrity of agricultural pursuits. Agricultural land divisions may be denied if the reviewing authority finds that the division of land is likely to create circumstances inconsistent with this policy.

3.9.3 Impact Assessment

3.9.3.1 X-a) Would the project physically divide an established community?

a) **No Impact.** The proposed Project is located in an agricultural area in the unincorporated jurisdiction of Sacramento County. The City of Elk Grove is located under a mile to the west. The proposed Project does not have any residential uses onsite. There are a few scattered rural residences associated with the agricultural operations in the area and other surrounding uses are primarily agricultural uses. Therefore, the proposed Project would not physically divide any established community.

3.9.3.2 X-b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

b) Less Than Significant Impact. The proposed Project involves development of a recharge basin to benefit irrigation water supply for agricultural uses which is consistent with the agricultural land use designations of the 2030 General Plan and implementing zoning ordinance districts for the site and vicinity. There are no specific plans or local costal programs applicable to the site or inland Sacramento area. Therefore, the proposed Project would not conflict any applicable plans, policies, or regulations of Sacramento County.

3.9.3.3 X-c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

c) No Impact. There is no habitat conservation plan or natural community conservation plan adopted by the County of Sacramento that is applicable to the proposed Project site. Therefore, the proposed Project cannot be in conflict with any such plans. There is no impact.

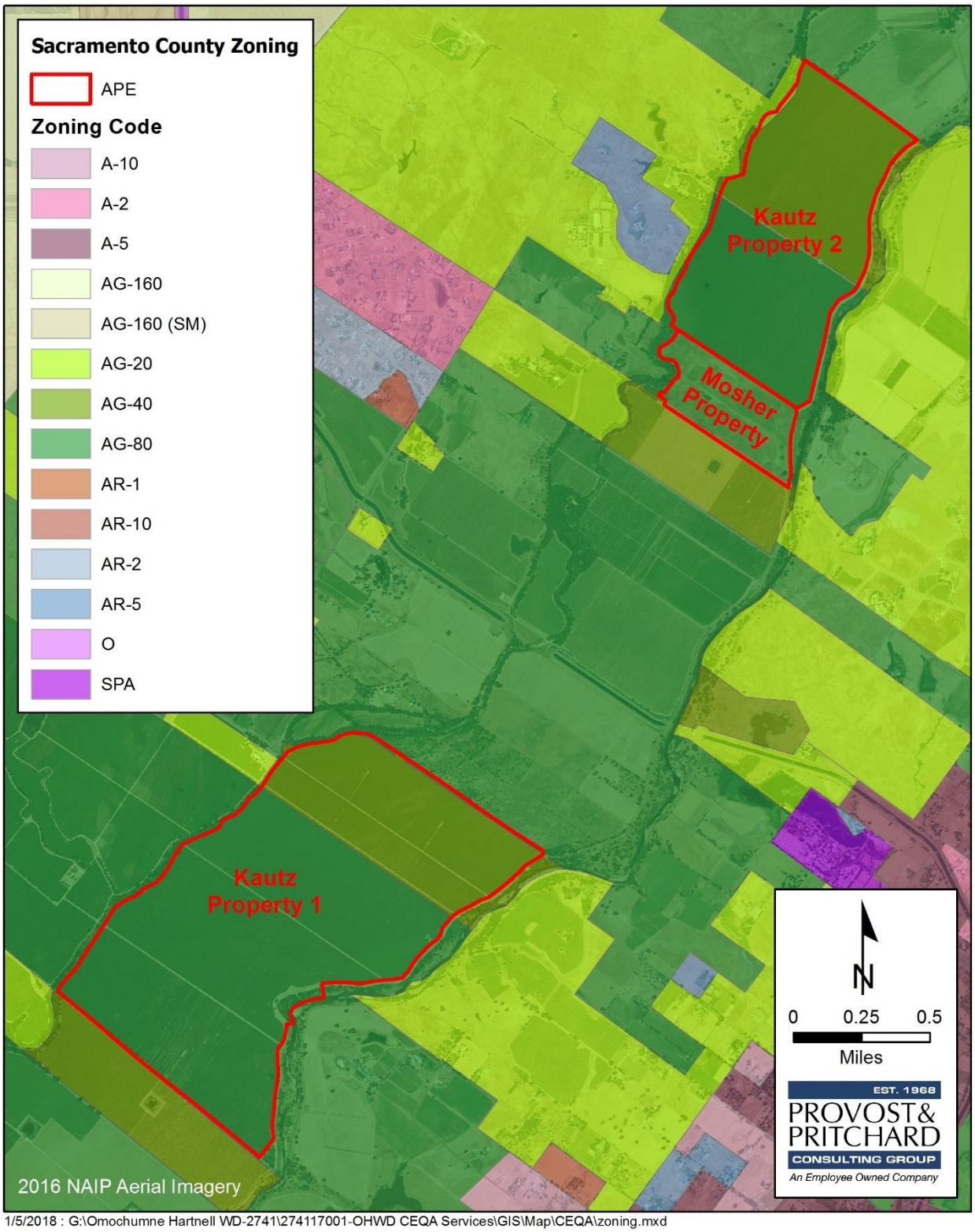

Figure 3-6. Zoning Map

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3.10 Mineral Resources

Table 3-17. Mineral Resources

Mineral Resources					
	Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.10.1 Environmental Setting

Aggregate deposits within Sacramento County are located in the Old American River Channel and floodplain and channel of the Cosumnes River. The proposed Project is ~~outside of~~ within the Cosumnes River's floodplain. All of the sand and gravel mined in Sacramento County is used for construction. Clay is surface-mined in at least two locations and topsoil from one location on the Cosumnes River[27]. However, the proposed Project site is not located on an active aggregate or clay mine site.

The California Department of Conservation, Division of Oil, Gas and Geothermal Resources provides mine information to the public through the Department of Conservation Data Viewer website. The website is an interactive web map designed to provide information such as mine name, operation status, commodities sold, and mine locations. According to the MOL geographic information system (GIS), there are no active oil or gas wells within the proposed Project site[28].

3.10.2 Regulatory Setting

3.10.2.1 Federal

There are no federal regulations pertaining to mineral resources relevant to the proposed Project.

3.10.2.2 State

California Surface Mining and Reclamation Act of 1975: Enacted by the State Legislature in 1975, the Surface Mining and Reclamation Act (SMARA), Public Resources Code § 2710 et seq., insures a continuing supply of mineral resources for the State. The act also creates surface mining and reclamation policy to assure that:

[27] Sacramento Local Agency Formation Commission. Proposed City of Elk Grove Sphere of Influence Amendment. Draft EIR. http://www.saclafco.org/SphereofInfluenceInformation/Documents/elkgrovesoi/proposedsoi_amenddeir/sac_029403.pdf Accessed 12 December 2017.
[28] State of California, Department of Conservation, http://maps.conservation.ca.gov/mol/index.html Accessed 12 December 2017.

- Production and conservation of minerals is encouraged;
- Environmental effects are prevented or minimized;
- Consideration is given to recreational activities, watersheds, wildlife, range and forage, and aesthetic enjoyment;
- Mined lands are reclaimed to a useable condition once mining is completed; and
- Hazards to public safety both now and in the future, are eliminated.

Areas in the State (city or county) that do not have their own regulations for mining and reclamation activities rely on the Department of Conservation, Division of Mines and Geology, Office of Mine Reclamation to enforce this law. SMARA contains provisions for the inventory of mineral lands in the State of California. The State Geologist, in accordance with the State Board's Guidelines for Classification and Designation of Mineral Lands, must classify Mineral Resource Zones (MRZ) as designated below:

- **MRZ-1.** Areas where available geologic information indicates that there is minimal likelihood of significant resources.
- **MRZ-2.** Areas underlain by mineral deposits where geologic data indicate that significant mineral deposits are located or likely to be located.
- **MRZ-3.** Areas where mineral deposits are found but the significance of the deposits cannot be evaluated without further exploration.
- **MRZ-4.** Areas where there is not enough information to assess the zone. These are areas that have unknown mineral resource significance.

SMARA only covers mining activities that impact or disturb the surface of the land. Deep mining (tunnel) or petroleum and gas production is not covered by SMARA.

3.10.2.3 Local

Sacramento County 2030 General Plan The Sacramento County General Plan's Conservation Element has goals, objectives and policies related to mineral resources; however, none of which apply to the proposed Project.

There is likely some local county ordinance implementing SMARA. Should look to see if there's anything there that might affect or require a permit for the proposed excavation??

3.10.3 Impact Assessment

3.10.3.1 XI-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?

3.10.3.2 XI-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?

a-b) No Impact. The proposed Project includes earthworking limited to the conveyance system, and no soil is being exported from the construction site; therefore, there will be no significant loss of availability of a mineral resource associated with an important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. California's Division of Oil, Gas and Geothermal Resources has no records of closed or active oil or gas wells on the proposed Project site. Therefore, construction of the proposed Project would not result in the loss of availability of a known mineral resource since no known mineral resources occur in this area.

3.11 Noise

Table 3-18. Noise

Noise					
	Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b)	Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	☒	☐
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
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 expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

3.11.1 Environmental Setting

The proposed Project site and surrounding vicinity possesses ambient noise dominated by agricultural, riparian and some rural residential uses. Daytime ambient noise levels around the proposed Project area is associated with farm equipment and associated activities, as well as rural traffic noise. While much of unincorporated Sacramento County is composed of discrete small unincorporated communities and agricultural uses and associated rural residences, the primary source of noise generation comes from major highways, such as State Route 99 and Interstate 5 and 80, as well as other state highways, several airports, and industrial facilities[29].

According to Sacramento County Water Agency's 2002 Zone Water Supply Master Plan EIR, Maximum noise levels generated by farm-related tractors and similar equipment typically range from 77 to 85 dB at a distance of 50 feet from the tractor, depending on the horsepower of the tractor and the operating conditions[30].

[29] Fresno County General Plan Background Report (2000), page 10-24.
[30] Sacramento County Water Agency. 2002 Zone 40 Water Supply Master Plan EIR. www.waterresources.saccounty.net/Zone%2040/Z40%20Sect%204.4%20Noise.pdf Accessed 22 January, 2018.

Due to the seasonal nature of the vineyard cultivation, there are often extended periods of time when little to no noise is generated at the proposed Project site, followed by short-term periods of mechanical equipment usage and corresponding noise generation related to tilling, fumigation, infrastructure maintenance and harvesting. The Sacramento County identifies the allowable on-site noise range for agricultural land uses is up to 75 dB.

Sensitive Receptors

Sensitive receptors are areas where occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants, including noise pollution. They include, but are not limited to, hospitals, schools, daycare facilities, elderly housing, and convalescent facilities[31].

The nearest sensitive receptor is the Small Cloud Christian School, located 1.4 miles east of the southern portion of the Project. Cosumnes River Elementary is located 2.2 miles east of the northern portion of the Project.

Nearest Airports

The private-use Luchetti Ranch Airport is located 0.8 miles southeast of the southern portion of the proposed Project and the private-use Rancho Murieta Airport is located 4.6 miles east of the northern portion of the proposed Project. The nearest international airport is the Sacramento International Airport, located 24 miles northwest of the proposed Project.

3.11.2 Regulatory Setting

3.11.2.1 Federal

There are no federal noise regulations that apply to the Project.

3.11.2.2 State

California Building Code: The California Code of Regulations (CCR) Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The California Building Code incorporates by reference the International Building Code with necessary California amendments. The International Building Code is a widely adopted model building code in the United States published by the International Code Council. Much of the text within the California Building Code has been tailored for California earthquake conditions. The CBC contains standards for insultation necessary to achieve various thresholds of noise attenuation inside of buildings. The most recent triennial edition of the CBC was published July 1, 2106 and became effective January 1, 2017.

3.11.2.3 Local

Sacramento County 2030 General Plan The Sacramento County 2030 General Plan's Noise Element have the following objectives and policies related to noise:

> *Policy NO-8*. Noise associated with construction activities shall adhere to the County Code requirements. Specifically, Section 6.68.090(e) addresses construction noise within the County.

[31] EPA. Sensitive Receptors. https://www3.epa.gov/region1/eco/uep/sensitivereceptors.html Accessed 22 January 2018.

Policy NO-12. All noise analyses prepared to determine compliance with the noise level standards contained within this Noise Element shall be prepared in accordance with Table 3 (of Noise Element).

3.11.3 Impact Assessment

3.11.3.1 XII-a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

a) Less Than Significant Impact. Project operation would not generate significant noise; however, construction could involve temporary noise sources. The Project is located within agricultural lands, accustomed to noises associated with farm equipment. Operational maintenance activities would be infrequent and as-needed. Any impacts would be mild, temporary and less than significant.

3.11.3.2 XII-b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

b) Less Than Significant Impact. The project will not expose persons or generate excessive vibration or noise levels. The proposed Project may have some excavation and grading associated with the pipeline installation, but it would be minimal and temporary.

3.11.3.3 XII-c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? and,

c) Less Than Significant Impact. The proposed Project is located within agricultural lands in an area accustomed to noises generated by agricultural equipment. The noise generated during the construction phase will be consisted with such noise. The operation and maintenance of the recharge basin and infrastructure will not result in a noticeable permanent increase in noise levels in this rural agricultural area with scattered rural residences. Any impact would be less than significant.

3.11.3.4 XII-d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

d) Less than Significant Impact. The proposed Project could create elevated short-term noise impacts related to the operation of construction equipment. The temporary noise sensitive uses will be limited to day-time hours (7 a.m. and 10 p.m.). Any impact would be less than significant.

3.11.3.5 XII-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 expose people residing or working in the project area to excessive noise levels? and,

3.11.3.6 XII-f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

e-f) No Impact. The Luchetti Ranch Airport is located 0.8 miles southeast of the southern portion of the Project and the Rancho Murieta Airport is located 4.6 miles east of the northern portion of the Project. The proposed Project does not include the provision of residential housing or any permanent work environments (beyond baseline conditions) that would expose more people to excessive noise levels related to the operation of the private airstrips. There will be no impact.

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3.12 Population and Housing

Table 3-19. Population and Housing

Population and Housing					
Would the project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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)?	☐	☐	☐	☒
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

3.12.1 Environmental Setting

The immediate area surrounding the proposed Project consists primarily of agriculturally productive lands, associated agricultural-support facilities and rural residential homes and infrastructure. A variety of water facilities exist within the proposed Project's vicinity area including canals, drainage ditches, tail water and regulating ponds, reservoirs, wells, pump stations, pipelines, and associated appurtenances. Properties within the immediate vicinity of the proposed Project located within the jurisdiction of Sacramento County are designated for agriculture and zoned AG-40 and AG-80.

Sacramento County's estimated population in 2016, according to Census' Quickfacts, was 1,514,460 with an estimated 565,815 housing units[32].

3.12.2 Regulatory Setting

3.12.2.1 Federal & State

There are no federal or State regulations, plans, programs, and guidelines associated with population or housing that are applicable to the proposed Project.

3.12.2.2 Local

There are no local regulations, plans, programs, and guidelines associated with population or housing that are applicable to the proposed Project.

[32] Census Quickfacts. Sacramento County. https://www.census.gov/quickfacts/fact/table/sacramentocountycalifornia/PST045216 Accessed 12 December 2017.

3.12.3 Impact Assessment

3.12.3.1 XIII-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)?

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

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

a-c) No Impact. Construction associated with the proposed Project includes a 5,882-ft and a 9,286-ft. pipeline to evenly spread surface water to fallow and vineyard land for recharge purposes. No residential structures would be built, and no housing or people would be displaced by the Project. Population growth will not be influenced directly or indirectly by Project implementation. Therefore, there would be no impact.

3.13 Public Services

Table 3-20. Public Services

Public Services					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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?	☐	☐	☐	☒
	Police protection?	☐	☐	☐	☒
	Schools?	☐	☐	☐	☒
	Parks?	☐	☐	☐	☒
	Other public facilities?	☐	☐	☐	☒

3.13.1 Environmental Setting

Fire Protection: The proposed Project area would be served by the Sacramento Metropolitan Fire District Station 58, located approximately 0.5 miles west of the northern portion of the proposed Project site.

Police Protection: The proposed Project would be served by the Wilton Service Center of the Sacramento County Sheriff's Office, located approximately 2.5 miles south/southwest of the proposed Project site.

Schools: The nearest school is Small Cloud Christian School, located 1.4 miles East of the southern portion of the proposed Project site. Cosumnes River Elementary is located 2.2 miles east of the northern portion of the proposed Project site.

Parks: The Laguna Creek Parkway, located approximately 3.2 miles west/northwest of the proposed Project site is the nearest park to the site. The next nearest is Mather Regional Park, located approximately 3.5 miles northwest of the northern portion of the proposed Project site. Both parks are maintained by the County.

Landfills: The Kiefer Landfill, located 1.5 miles northwest of the proposed Project, is the primary landfill for all unincorporated areas of Sacramento County, and would serve the proposed Project.

3.13.2 Regulatory Setting

3.13.2.1 Federal

No federal policies regarding public services are relevant to the proposed Project.

3.13.2.2 State

California Building Code: The California Code of Regulations (CCR) Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The California Building Code incorporates by reference the International Building Code with necessary California amendments. The International Building Code is a widely adopted model building code in the United States published by the International Code Council. Much of the text within the California Building Code has been tailored for California earthquake conditions. The CBC contains standards for insultation necessary to achieve various thresholds of noise attenuation inside of buildings. The most recent triennial edition of the CBC was published July 1, 2106 and became effective January 1, 2017.

3.13.2.3 Local

The Sacramento County General Plan contains policies related to public services; however, none apply to the proposed Project.

3.13.3 Impact Assessment

3.13.3.1 XIV-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:

a) No Impact. The proposed Project would not result in any new or the need for 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 public services. The Project is a passive use involving pipeline delivery of and recharge of surface water from recharge basins into the groundwater aquifer. The proposed Project will not generate new population, school children or business uses requiring changes or additions to police or fire services, park space needs, school facilities, or landfill capacity. There would be no impact.

3.14 Recreation

Table 3-21. Recreation

Recreation					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

3.14.1 Environmental Setting

The Laguna Creek Parkway, located approximately 3.2 miles west/northwest of the proposed Project, is the nearest park to the site. The next nearest is Mather Regional Park, located approximately 3.5 miles northwest of the northern portion of the proposed Project. Both parks are managed by Sacramento County.

3.14.2 Regulatory Setting

3.14.2.1 Federal, State & Local

There are no federal, state or local regulations, plans, programs, or guidelines associated with recreation that are applicable to the proposed Project.

3.14.3 Impact Assessment

3.14.3.1 XV-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?

a) No Impact. No population growth would be associated with the proposed Project or be necessitated by the proposed Project. The proposed Project would therefore not increase the demand for recreational facilities or put a strain on the existing recreational facilities. There would be no impact.

3.14.3.2 XV-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?

b) No Impact. The proposed Project does not include recreational facilities. As there is no population growth associated with the proposed Project, construction or expansion of nearby recreational facilities would not be necessary. There would be no impact.

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3.15 Transportation/Traffic

Table 3-22. Transportation/Traffic

Transportation/Traffic					
	Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a)	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b)	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	☐	☐	☐	☒
d)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e)	Result in inadequate emergency access?	☐	☐	☐	☒
f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

3.15.1 Environmental Setting

The proposed Project is surrounded by agriculture and very little development. No state or interstate highways are in the immediate vicinity. The proposed Project will not result in an increase in staff and associated vehicle trips. Roadways surrounding the site and providing access to the sites operate without congestion issues. The Luchetti Ranch Airport is located 0.8 miles southeast of the southern portion of the Project and the Rancho Murieta Airport is located 4.6 miles east of the northern portion of the Project. The nearest international airport is the Sacramento International Airport, located 24 miles northwest of the Project.

3.15.2 Regulatory Setting

3.15.2.1 Federal

There are no federal laws or regulations regarding transportation and traffic that apply to the proposed Project.

3.15.2.2 State

State of California Transportation Department Transportation Concept Reports: Each District of the State of California Transportation Department (Caltrans) prepares a Transportation Concept Report (TCR) for every state highway or portion thereof in its jurisdiction. The TCR usually represents the first step in Caltrans' long-range corridor planning process. The purpose of the TCR is to determine how a highway will be developed and managed so that it delivers the targeted LOS and quality of operations that are feasible to attain over a 20-year period, otherwise known as the "route concept" or beyond 20 years, for what is known as the "ultimate concept".

3.15.2.3 Local

Sacramento County General Plan Circulation Element

> *Policy CI-10.* Land development projects shall be responsible to mitigate the project's adverse impacts to local and regional roadways.

3.15.3 Impact Assessment

3.15.3.1 XVI-a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

3.15.3.2 XVI-b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

a-b) Less Than Significant Impact. Project construction would be temporary and some additional traffic will occur through the duration of the two-and-a-half-month construction period due to worker trips. Construction equipment, including trenchers and trenchers will be transported onsite to remain there during the construction period. Operational traffic consists of infrequent, as-needed maintenance trips. There would not be a significant adverse effect to existing roadways in the area.

There are no pedestrian or bicycle facilities in the vicinity of the site. Therefore, the proposed Project would not conflict with any congestion management plan or any other applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system.

3.15.3.3 XVI-c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?

c) No Impact. The Luchetti Ranch Airport is located 0.8 miles southeast of the southern portion of the Project and the Rancho Murieta Airport is located 4.6 miles East of the northern portion of the Project. The nearest international airport is the Sacramento International Airport, located 24 miles northwest of the

Project. The construction of proposed Project would not cause an increase in air traffic levels or cause a change in air traffic location. There would be no impact.

3.15.3.4XVI-d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

d) No Impact. No new roadway design features are associated with the proposed Project. Therefore, there will be no impact.

3.15.3.5XVI-e) Result in inadequate emergency access?

e) No Impact. No roads would be modified as a result of the proposed Project; therefore, there would be no impact to any emergency access on local roadways.

3.15.3.6XVI-f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

f) No Impact. The proposed Project would not permanently alter any roadways, nor would it require the need for public transit, bicycle, or pedestrian facilities. Therefore, the proposed Project would not conflict with any adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities and there would be no impact.

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3.16 Tribal Cultural Resources

Table 3-23. Tribal Cultural Resources

Tribal Cultural Resources				
Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) 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:	☐	☐	☒	☐
i. 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	☐	☐	☒	☐
ii. 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, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☒	☐

3.16.1 Environmental Setting

The Project site is situated adjacent to the northwest toe of the levee adjacent to the northwest side of the Cosumnes River, south of the unincorporated community of Sloughhouse, in Sacramento County, California. The proposed Project is located on the valley floor near the western flank of the north-central Sierra Nevada foothills at an average elevation of approximately 90-feet above mean sea level. The property is located a short distance south of Sloughhouse and is surrounded by agricultural development and very low density residential development. Multiple stream courses, including the Cosumnes River which is located adjacent to the southeast side of the present area of potential effect (APE)[33], are located within the general project vicinity. Terrain consists primarily of heavily disturbed lands which slope gently to the south.

The proposed Project area has been intensively farmed for over a century and little (if any) natural vegetation remains. Agriculture spurred the replacement of native plants and animals with domesticated species.

[33] According to the Archaeological Inventory Survey report, the Area of Potential Effects(APE) consists of the three separate agricultural parcels within which groundwater recharge is proposed.

3.16.2 Regulatory Setting

3.16.2.1 Federal

There are no Federal laws and regulations that apply to the project.

3.16.2.2 State

The Project is subject to Native American consultation pursuant to California statute: Public Resources Code (PRC) Section 21080.3 (AB 52). Under this provision of the PRC, the lead agency, within 14 days of determining that an application is complete, must notify any Native American Tribe that has previously requested such notification about the project and inquire whether the Tribe wishes to initiate formal consultation. Tribes have 30 days from receipt of notification to request formal consultation. The lead agency then has 30 days to initiate the consultation, which then continues until the parties come to an agreement regarding necessary mitigation or agree that no mitigation is needed, or one or both parties determine that negotiation occurred in good faith, but no agreement will be made.

In general, tribal consultation is required only with those tribes that formally request consultation, in writing. The District previously received an email letter from the Wilton Rancheria Tribe in response to a Formal Notification December 18, 2017 to the Wilton Rancheria Tribe describing the project and requesting if formal consultation is appropriate. On December 20, 2017, Antonio Ruiz of the Wilton Rancheria Tribe provided email correspondence requesting consultation.

3.16.2.3Local

There are no specific local policies regarding Tribal Cultural Resources that are applicable to the proposed Project.

3.16.3 Impact Assessment

3.16.3.1. XVII-a) 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:

XVII-a-i) 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)

XVII-a-ii) 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, the lead agency shall consider the significance of the resource to a California Native American tribe.

a-i-a-ii) Less than Significant Impact.

The District ~~previously received an email letter from the Wilton Rancheria Tribe in response to a Formal Notification~~ sent a letter via certified mail on December 18, 2017 to the Wilton Rancheria Tribe describing the project and requesting ~~if formal consultation is appropriate~~ review of the project. On December 20, 2017, Antonio Ruiz of the Wilton Rancheria Tribe provided email correspondence requesting consultation. Subsequently the District made an attempt to meet with the Wilton Tribe on several occasions. The District

provided a copy of the Cultural Resources Report on March 29, 2018 ~~reached out to Antonio Ruiz and sent him some additional information including~~ and provided Project Shapefiles on April 18, 2018.

There ha~~s~~d been no further correspondence from the Tribe. The District released a Draft Initial Study and Mitigated Negative Declaration on July 11, 2018. A copy of the IS/MND was provided to the Wilton Tribe via UPS delivery on July 11, 2018. Notices of Intent for that document were published on the District's website and in the local newspaper. Notice of an extension of the public comment period was again provided to the Wilton Tribe via UPS, on August 14, 2018. The District conducted a hearing on that IS/MND on August 21, 2018 and the public comment period for the IS/MND ended on August 25, 2018.

No comments were received from the Wilton Tribe during the public comment period or the extension of the public comment period. In light of the fact that the District received no response or comments from the Wilton Tribe since providing the Cultural Resources Study and GIS Shapefiles in April of 2018, the District concluded that mutual agreement could not be reached, or that the Tribe had no further comments to provide. In accordance with Public Resources Code Section 21080.3.2(b)(2) consultation is now concluded.

3.17 Utilities and Service Systems

Table 3-24. Utilities and Service Systems

Utilities and Service Systems					
Would the project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e)	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?	☐	☐	☐	☒
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

3.17.1 Environmental Setting

The site of the proposed Project currently generates no municipal wastewater nor does it benefit from municipal stormwater drainage facilities. The site's current solid waste disposal needs are minimal.

Water needs for irrigation of the proposed Project site vineyards is currently supplied by groundwater (pumping). Recharging of the groundwater aquifer will reduce raise water levels and reduce pumping efforts.

3.17.2 Regulatory Setting

3.17.2.1 Federal

Clean Water Act: The Clean Water Act (CWA) is intended to restore and maintain the chemical, physical, and biological integrity of the nation's waters (33 CFR 1251). The regulations implementing the CWA protect waters of the U.S. including streams and wetlands (33 CFR 328.3). The CWA requires states to set standards to protect, maintain, and restore water quality by regulating point source and some non-point source

discharges. Under Section 402 of the CWA, the National Pollutant Discharge Elimination System (NPDES) permit process was established to regulate these discharges.

3.17.2.2 State

State Water Resources Control Board's Waste Discharge Requirement (WDR) Program: Title 27, CCR, Section 20005 et seq. (hereafter Title 27 of State regulations pertain to the treatment, storage, processing, or disposal of liquid and solid waste into surface or groundwater). In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non-Chapter 15 (Non-15) Program") regulates point source discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

3.17.2.3Local

No specific local policies regarding utilities and service systems are applicable to the proposed Project.

3.17.3 Impact Assessment

3.17.3.1XVII-a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

3.17.3.2XVII-b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

a-b) No Impact. The proposed Project would not exceed wastewater treatment requirements or require new facilities. The Project entails the pipeline construction and surface water diversion that would not generate a significant amount of wastewater or require expansion of existing facilities. Therefore, the Project will not generate the need for expanded wastewater treatment facilities nor have a significant environmental impact.

3.17.3.3 (XVII-c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c) No Impact. The proposed Project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities. There would be no impact.

3.17.3.4XVII-d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

d) No Impact. The proposed Project entails improving groundwater supply. Therefore, there will be no impact.

3.17.3.5XVII-e) 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?

e) No Impact. The proposed Project will temporarily generate an insignificant amount of waste during construction. There would be no impact.

3.17.3.6 XVII-f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

f) Less Than Significant Impact. The nearest active landfill that would serve the proposed Project is the Kiefer Landfill, located approximately 1.5 miles southwest of the proposed Project. As noted in Impact (XVII-e) the proposed Project would generate some solid waste during construction, however, it will be temporary and minimal. Therefore, there would be no impact.

3.17.3.7 XVII-g) Comply with federal, state, and local statutes and regulations related to solid waste?

g) No Impact. The proposed Project would continue to comply with any federal, state, and local regulations regarding solid waste. There would be no impact.

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3.18 CEQA Mandatory Findings of Significance

Table 3-25. Mandatory Findings of Significance

Mandatory Findings of Significance					
Would the project:		Potentially Significant Impact	Less than Significant With Mitigation Incorporation	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, 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?	☐	☒	☐	☐
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)?	☐	☒	☐	☐
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

3.18.1 Impact Assessment

3.18.1.1 XVIII-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, 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?

a) Less Than Significant Impact with Mitigation Incorporated. Based on the analysis conducted in this Initial Study/Mitigated Negative Declaration, impacts to Aesthetics, Air Quality, Geology/Soils, Greenhouse Gases, Hazards/Hazardous Materials, Hydrological Resources, Noise, Population and Housing, public Services, Traffic and Transportation, Tribal Cultural Resources, Utilities/ Service Systems would be less than significant. Potential impacts to Biological Resources and Cultural Resources would be less than significant with implementation of mitigation measures BIO – 1a-c, 2a-d, 3a-c, 4a-c, 5, 6a-b, 7, CR-1, and CR-2. Additionally, with implementation of the Best Management Practices for construction activities, the Proposed Project's potential to degrade the quality of the environment, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a protected species or eliminate important examples of the major periods of California history or prehistory would be less than significant with implementation of the above noted mitigation measures.

3.18.1.2XVIII-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)?

b) Less Than Significant Impact with Mitigation Incorporated. Cumulatively considerable means that "the incremental effects of an individual 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 Project." The County of Sacramento is not actively pursuing any Projects of similar nature at this time nor is County aware of any past, current or probable future Projects resulting in related impacts within its district boundaries. The Proposed Project would result in less than significant impacts to the environment with incorporation of mitigation measures BIO – 1a-c, 2a-d, 3a-c, 4a-c, 5, 6a-b, 7, CR-1, and CR-2. As mitigated, the proposed Project will not have impacts that are cumulatively considerable.

3.18.1.3XVIII-c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

c) Less than Significant Impact. The Proposed Project will not result in substantial adverse effects on human beings, either directly or indirectly. With implementation of Best Management Practices and general safety protocols during construction and maintenance of the Proposed Project, impacts will be less than significant.

4 Mitigation Monitoring and Reporting Program

This Mitigation Monitoring and Reporting Program (MMRP) is based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) for the Omochumne-Hartnell Water District's Groundwater Recharge Project. The MMRP lists mitigation measures recommended in the IS/MND for the proposed Project and identifies monitoring and reporting requirements.

Table 4-1. Mitigation Monitoring and Reporting Program presents the mitigation measures identified for the proposed Project. Each mitigation measure is identified and numbered to match the topical section to which it pertains, a hyphen, and the impact number. For example, BIO-2 would be the second mitigation measure identified in the Biological Resources Section of the IS/MND.

The first column of **Table 4-1. Mitigation Monitoring and Reporting Program** identifies the mitigation measure. The second column, entitled "When Monitoring is to Occur," identifies the time the mitigation measure should be initiated. The third column, "Frequency of Monitoring," identifies the frequency of the monitoring of the mitigation measure to assure it is being carried out in the manner specified and to determine when the mitigation is fully achieved. The fourth column, "Agency Responsible for Monitoring," names the party ultimately responsible for ensuring that the mitigation measure is monitored and properly implemented. The last columns (5 and 6) will be used by the District to ensure that individual mitigation measures have been monitored at the correct time and frequency, and confirmation of full implementation. complied with and monitored.

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Table 4-1. Mitigation Monitoring and Reporting Program

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Lead Agency Verification and date of Compliance**
Biological Resources					
Mitigation Measure BIO-1: Valley Elderberry Longhorn Beetle					
Mitigation 1a (protocol survey). Prior to the start of construction, a qualified biologist will survey for VELB habitat (i.e. elderberry shrubs) within and adjacent to proposed construction zones. All elderberry shrubs with stems one inch or greater in diameter at ground level encountered will be mapped using a GPS unit and flagged in the field for identification by construction crews.	Prior to Construction	Once – Prior to Construction	Omochumne Hartnell Water District	Survey results of a Qualified Biologist	
Mitigation 1b (avoidance). The applicant shall design the project to avoid existing elderberry shrubs with stems measuring one inch in diameter or greater at ground level and a 20-foot buffer around their dripline. Where possible, construction activities will take place outside of the VELB's flight season (March through June). If construction activities involve grading, trenching, or mowing, and are to occur during the flight season, the applicant shall design the project to avoid existing elderberry shrubs and a 100-foot buffer around their dripline. This will require that orange construction fencing be installed around each shrub at least 20 or 100 feet, respectively, from the dripline, and that signs be attached to the fencing identifying the shrubs as endangered species habitat. Should a 100-foot buffer not be feasible, the USFWS will be consulted prior to proceeding with construction activities. Prior to initiating any construction activity where elderberry bushes and a buffer are to be protected from disturbance, a biologist must make a brief on-site instructional presentation to construction crews about the VELB and the consequences of destroying its habitat without take authorization of the USFWS. If construction work is to occur during the beetle's flight season, then the work area must be wetted each day to avoid the creation of dust that may adversely affect the beetle's feeding and flight. The USFWS's *Guidelines for the Valley Elderberry Longhorn Beetle* (1999) is provided in Appendix E.	On-going	On-going	Omochumne Hartnell Water District	Survey results of a Qualified Biologist	

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Lead Agency Verification and date of Compliance**
Mitigation 1c (compensation). If individual shrubs with stems one inch or greater in diameter at ground level and a 20-foot buffer around these shrubs cannot be avoided, they shall be transplanted to a conservation area following the methods described in the USFWS's Guidelines for the Valley Elderberry Longhorn Beetle (1999). Each elderberry shrub that is transplanted or destroyed will be replaced in a conservation area with elderberry seedlings or cuttings at a ratio ranging from 1:1 to 8:1, and native plants associated with the project site will be planted at ratios ranging from 1:1 to 2:1, as described in the USFWS's Guidelines for the Valley Elderberry Longhorn Beetle (1999).	If avoidance cannot be achieved	Once – upon the completion of a survey by a Qualified Biologist	Omochumne Hartnell Water District	Compensation plan developed by a Qualified Biologist	
Mitigation Measure BIO-2: Central Valley Steelhead, Central Valley Chinook Salmon (Fall-run), and Pacific Lamprey					
Mitigation Measure 2a (Avoidance). The new diversion pipes shall be constructed when the river is at the lowest level (late summer). The new diversion intakes should be located above the low-water surface, such that in-water work does not occur. During construction, measures will be taken to prevent soil, debris, or any other objects from passing into the Cosumnes River should be taken (see measure 5).	Prior to and during construction	Prior to and during construction	Omochumne Hartnell Water District	Survey by a Qualified Biologist	
Mitigation Measure 2b (Minimization). If in-water work is required an education training, preconstruction survey, and construction monitoring will be conducted. Prior to the start of construction, a qualified biologist will train all project staff regarding the sensitive fish species, their protection, penalties for non-compliance, and the project boundaries. Preconstruction surveys will be completed by a qualified biologist prior to in-water work. An exclusion device (i.e. silt fence, some type of screen, or a cofferdam) shall then be placed just outside of the construction area to prevent these species from entering the construction area. A qualified biologist will monitor all construction, including the installation of the exclusion device, within the exclusion area. If these species are detected prior to or during construction activities, the qualified biologist will capture and translocate any individuals that are discovered back into the river out of the work zone in the minimum amount of time necessary.	Prior to and during construction	Prior to and during construction	Omochumne Hartnell Water District	Survey by a Qualified Biologist	

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Lead Agency Verification and date of Compliance**
Mitigation Measure 2c (Fish Screens). For the purpose of the stated Project operations, if diversion intakes are to be operated for the Project February 15 through June, fish screens of appropriate size and mesh width will be constructed and fitted to the existing and new diversion intakes prior to February 15 by OHWD. The criteria for these fish screens will follow the National Marine Fisheries Service's (NMFS) *Fish Screening Criteria for Anadromous Salmonids* (1997), the Fish Screen and Bypass Facilities section of the NMFS's *Anadromous Salmonid Passage Facility Design* (2011) or be coordinated with the NMFS.	Prior to and during operation	Prior to and during operation	Omochumne Hartnell Water District	District Manager to monitor diversion schedules	
Mitigation Measure 2d (Fish Screen Maintenance). Installed passive fish screens should be maintained appropriately such that the screen surface area remains free of debris. Alternatively, the installed fish screens may be fitted with brushes or other devices (i.e. airburst) that keep the screen free of debris (i.e. active screens) every five minutes.	Ongoing	Ongoing	Omochumne Hartnell Water District	Ongoing maintenance and monitoring by District Staff	
Mitigation Measure BIO-3: Western Pond Turtles					
Mitigation Measure 3a (Pre-construction Survey). A qualified biologist will conduct a pre-construction survey for the western pond turtle in the riparian and aquatic habitat of the project sites within 15 days of the onset of construction in these areas. The information collected from this pre-construction survey will serve primarily to alert the biologist and construction crews of the general level of western pond turtle activity at the sites.	Prior to construction	Prior to construction	Omochumne Hartnell Water District	Survey results by a Qualified Biologist	
Mitigation Measure 3b (Monitoring and Avoidance). The construction crew will inspect the work area each day prior to the start of work. If any western pond turtles are observed, they will be avoided and allowed to passively leave the site prior to the initiation of construction.	Prior to and during construction	Each day prior to and during construction	Omochumne Hartnell Water District	Construction crew daily reports	
Mitigation Measure 3c (Relocation). Should any western pond turtles be observed during the pre-construction surveys or monitoring, and they do not leave the site on their own, a qualified biologist may relocate the turtle(s) 500 feet up- or downstream from the project.	Once, if needed	Once, if needed	Omochumne Hartnell Water District	Relocation plan by a Qualified Biologist	

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Lead Agency Verification and date of Compliance**
Mitigation Measure BIO-4: Nesting Raptors and Migratory Birds (Including Swainson's Hawk, White-tailed Kite, Northern Harrier, Grasshopper Sparrow, and Loggerhead Shrike)					
Mitigation Measure 4a (Avoidance). In order to avoid impacts to nesting raptors and migratory birds, the project will be constructed, if feasible, outside the nesting season, or between September 1st and January 31st.	During Construction	During Construction	Omochumne Hartnell Water District	District staff to approve construction schedule outside of the nesting season	
Mitigation Measure 4b (Preconstruction Surveys). If construction activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 30 days prior to the start of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet, where accessible, for all nesting raptors and migratory birds, with the exception of Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.	Prior to construction	Prior to construction	Omochumne Hartnell Water District	Survey results from a Qualified Biologist	
Mitigation Measure 4c (Establish Buffers). Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.	Prior to and during construction	Prior to and during construction	Omochumne Hartnell Water District	Buffers to be marked by a Qualified Biologist	

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Lead Agency Verification and date of Compliance**
Mitigation Measure BIO-5: Degradation of Water Quality in Seasonal Drainages, Stock Ponds, and Downstream Waters					
Mitigation Measure 5 (Erosion and Sediment Control). It is likely the RWQCB will include various Best Management Practices (BMPs) to control erosion and sedimentation of downstream waters (see Mitigation Measure 3.4.8); however, at a minimum the following BMPs shall be implemented: 1) Protection of exposed graded slopes from sheet, rill and gully erosion. Such protection could be in the form of erosion control fabric, hydromulch containing the seed of native soil-binding plants, straw mechanically imbedded in exposed soils, or some combination of the three. 2) Protection of natural drainage channels from sedimentation. Straw bale check dams, waddles, or other another method of protection should be installed below graded areas so that any sediment carried by surface runoff is intercepted and retained before it can enter the Cosumnes River. 3) Use of BMPs to control soil erosion and non-point source pollution. BMPs may include measures in 1 and 2 above, and may include any number of additional measures appropriate for this particular site and this particular project, including, but not-limited to, grease traps in staging areas, regular site inspections for pollutants that could be carried by runoff into natural drainages, etc.	Prior to and during construction	Prior to and during construction	Omochumne Hartnell Water District	Construction crew daily reports	
Mitigation Measure BIO-6: Northern California Black Walnut Trees, Oak Trees, Native Trees, and Natural Communities of Special Concern					
Mitigation 6a (avoidance). Wherever possible, project activities will avoid the removal of all walnut trees, riparian trees, and oak trees.	Prior to and during construction	Prior to and during construction	Omochumne Hartnell Water District	Survey results of a Qualified Biologist	

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Lead Agency Verification and date of Compliance**
Mitigation 6b (compensation). If the removal of walnut, riparian, oak or other native trees within the project sites cannot be avoided, then the applicant will provide compensatory mitigation in the form of in-kind plantings at a ratio of one to one, diameter at breast height (DBH). These plantings would be made inside an area suitable for each species. The plantings will be obtained from a local native plant nursery. Restoration would be implemented according to a plan prepared by a qualified biologist or arborist. This plan will define the objectives of the restoration effort, specify the species to be planted, describe the planting techniques, identify the maintenance activities during the establishment period, and specify a monitoring program that ensures that the restoration effort has met the restoration goals. Monitoring will be for a period of 5 years. If the project is not capable of supporting all of the required replacement trees, a sum equivalent to the replacement cost of the number of trees that cannot be accommodated may be paid to Sacramento County's Tree Preservation Fund or another appropriate tree preservation fund.	Once, if needed	Once, if needed	Omochumne Hartnell Water District	Compensation plan developed by a Qualified Biologist	

Mitigation Monitoring and Reporting Program					
Mitigation Measure/Condition of Approval	**When Monitoring is to Occur**	**Frequency of Monitoring**	**Agency Responsible for Monitoring**	**Method to Verify Compliance**	**Lead Agency Verification and date of Compliance**
Cultural Resources					
Mitigation Measure CUL-1: Archaeological Resources Encounter					
Consultation in the event of inadvertent discovery of cultural material: The present evaluation and recommendations are based on the findings of an inventory-level surface survey only. There is always the possibility that significant unidentified cultural materials could be encountered on or below the surface during the course of future development or construction activities. This caveat is particularly relevant considering the constraints generally to archaeological field survey, and particularly where substantial ground disturbance has occurred, as in the present case. In the event of an inadvertent discovery of previously unidentified cultural material, archaeological consultation should be sought immediately.	On-going	On-going	Omochumne Hartnell Water District	Construction crew daily reports	
Mitigation Measure CUL-2: Human Remains Encounter					
Consultation in the event of inadvertent discovery of human remains: Evidence of human burial or scattered human remains related to prehistoric occupation of the area could be inadvertently encountered anywhere within the project area during future construction activity or other actions involving disturbance to the ground surface and subsurface components. In the event of such an inadvertent discovery, the County Coroner would have to be informed and consulted, per State law. Ultimately, the goal of consultation is to establish an agreement between the most likely lineal descendant designated by the Native American Heritage Commission and the project proponent(s) with regard to a plan for treatment and disposition of any human remains and artifacts which might be found in association. Such treatment and disposition may require reburial of any identified human remains/burials within a "preserve" or other designated portion of the development property not subject to ground disturbing impacts.	On-going	On-going	Omochumne Hartnell Water District	Construction crew daily reports	

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Appendix A

Air Quality and Greenhouse Gas Emissions Information: CalEEMod

Appendix B

OWHD Groundwater Recharge Project Biological Evaluation Report

Appendix C

AB 52 Tribal Consultation