

**Notice of Determination****Appendix D****To:**

☒ Office of Planning and Research  
 U.S. Mail: Street Address:  
 P.O. Box 3044 1400 Tenth St., Rm 113  
 Sacramento, CA 95812-3044 Sacramento, CA 95814

☒ County Clerk

County of: Kern  
 Address: 1115 Truxtun Avenue  
 Bakersfield, CA 93301

**From:**

Public Agency: East Niles CSD  
 Address: 1417 Vale St.  
 Bakersfield, CA 93306  
 Contact: Timothy P. Ruiz  
 Phone: 661 871 2011

Lead Agency (if different from above):

Address: \_\_\_\_\_

Contact: \_\_\_\_\_

Phone: \_\_\_\_\_

**SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.**

State Clearinghouse Number (if submitted to State Clearinghouse): 2016091046 - Addendum to MND

Project Title: North Weedpatch Highway Water System Consolidation Project

Project Applicant: East Niles Community Services District

Project Location (include county): North Weedpatch Area in Kern County

**Project Description:**

The previously Approved Project consists of the consolidation of four private water systems onto the East Niles Community Services District (ENCSD) and includes construction of a groundwater well (1,400+/- gallons per minute capacity), hydropneumatic tank, 420,000+/- gallon storage tank, booster pump station, arsenic treatment facilities, and a water distribution network of approximately 10.3 miles of 8- to 12-inch diameter water pipelines and appurtenances. This Addendum to the previously adopted Mitigated Negative Declaration includes two additional private water service areas and an increase of about 10,700 lf of pipe. All other aspects of the approved project remain the same.

This is to advise that the East Niles Community Services District has approved the above  
☒ Lead Agency or ☐ Responsible Agency

described project on May 24, 2021 and has made the following determinations regarding the above  
 (date)  
 described project.

1. The project ☐ will ☒ will not] have a significant effect on the environment.
2. ☐ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.  
☒ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures ☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan ☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations ☐ was ☒ was not] adopted for this project.
6. Findings ☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:

District's Office - 1417 Vale St, Bakersfield CA

Signature (Public Agency): Tim Ruiz Title: General Manager

Digitally signed by Tim Ruiz  
 DN: cn=Tim Ruiz, o=East Niles Community Services  
 District, ou, email=truiz@eastnilesd.org, c=US  
 Date: 2021.06.09 11:59:36 -0700

Date: June 9, 2021

Date Received for filing at OPR: \_\_\_\_\_



State of California - Department of Fish and Wildlife  
**2016 ENVIRONMENTAL FILING FEE CASH RECEIPT**  
DFW 753.5a (Rev. 12/15/15) Previously DFG 753.5a

RECEIPT NUMBER:  
15 — 12152016 — 15133332  
STATE CLEARINGHOUSE NUMBER (if applicable)

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY EAST NILES COMMUNITY SERVICES DISTRICT	LEAD AGENCY EMAIL	DATE 12/15/2016
COUNTY/STATE AGENCY OF FILING Kern	DOCUMENT NUMBER 6467	

PROJECT TITLE NORTH WEEDPATCH HIGHWAY WATER SYSTEM CONSOLIDATION PROJECT			
PROJECT APPLICANT NAME EAST NILES COMMUNITY SERVICES DISTRICT	PROJECT APPLICANT EMAIL		PHONE NUMBER (661 ) 871-2011
PROJECT APPLICANT ADDRESS 1417 VALE ST	CITY BAKERSFIELD	STATE CA	ZIP CODE 93306

PROJECT APPLICANT (check appropriate box)

☐ Local Public Agency ☐ School District ☒ Other Special District ☐ State Agency ☐ Private Entity

CHECK APPLICABLE FEES:

<input type="checkbox"/> Environmental Impact Report (EIR)	\$3,070.00	\$	
<input checked="" type="checkbox"/> Mitigated/Negative Declaration (MND)(ND)	\$2,210.25	\$	2,210.25
<input type="checkbox"/> Certified Regulatory Program document (CRP)	\$1,043.75	\$	0.00

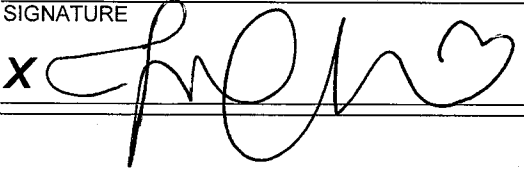
☐ Exempt from fee  
☐ Notice of Exemption (attach)  
☐ CDFW No Effect Determination (attach)  
☐ Fee previously paid (attach previously issued cash receipt copy)

<input type="checkbox"/> Water Right Application or Petition Fee (State Water Resources Control Board only)	\$850.00	\$	
<input checked="" type="checkbox"/> County documentary handling fee		\$	50.00
<input type="checkbox"/> Other		\$	

PAYMENT METHOD:

☐ Cash ☒ Credit ☐ Check ☐ Other

TOTAL RECEIVED \$ 2,260.25

SIGNATURE x 	AGENCY OF FILING PRINTED NAME AND TITLE KERN COUNTY CLERK, J. CHAIDES, OST
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**NOTICE OF DETERMINATION  
FOR THE  
ADDENDUM TO THE ADOPTED MITIGATED NEGATIVE DECLARATION  
FOR THE  
NORTH WEEDPATCH HIGHWAY WATER SYSTEM CONSOLIDATION PROJECT  
(SCH No. 2016091046)  
FOR THE  
EAST NILES COMMUNITY SERVICES DISTRICT**

The East Niles Community Services District as Lead Agency has determined that only minor technical changes or additions to the adopted Mitigated Negative Declaration are necessary to evaluate the environmental impacts of the North Weedpatch Highway Water System Consolidation Modified Project (Modified Project) in accordance with the California Environmental Quality Act (CEQA) guidelines and the State of California Division of Drinking Water Federal Cross Cutter guidelines. The Lead Agency has determined an Addendum to the Initial Study and Adopted Mitigated Negative Declaration (See Attachment 1) is appropriate for the Modified Project.

The Lead Agency hereby finds that the proposed Modified Project as described and proposed to be mitigated in the project's Mitigation Monitoring and Reporting Program (See Attachment 2) will not have a significant effect on the environment. This determination has been made according to the CEQA guidelines.

Said finding and subsequent Notice of Determination filing was approved by the Board of Directors of the East Niles Community Services District during their Regular Board Meeting of May 24, 2021.

**Tim Ruiz**  
Digitally signed by Tim Ruiz  
DN: cn=Tim Ruiz, o=East Niles  
Community Services District, ou,  
email=truiz@eastnilescsd.org, c=US  
Date: 2021.06.09 12:00:25 -07'00'

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Timothy P. Ruiz, PE  
General Manager  
East Niles Community Services District

**ATTACHMENT 1**

**AMMENDMENT TO INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION**





## **East Niles Community Services District**

### **North Weedpatch Highway Water System Consolidation Project**

### **California Environmental Quality Act (CEQA - Plus)**

**Addendum to the Initial Study and Adopted Mitigated Negative  
Declaration (SCH No. 2016091046)**

**EAST NILES COMMUNITY SERVICES DISTRICT**  
**Addendum to the Mitigated Negative Declaration and CEQA - Plus Initial Study**  
**for the**  
**North Weedpatch Highway Water System Consolidation Project**

**Introduction and Background**

Presently Approved Project

On November 21, 2016, the East Niles Community Services District (ENCSD, or District) approved the North Weedpatch Highway Water System Consolidation Project (referred to herein as the “Approved Project”). The project involved Consolidation of the East Wilson Road Water Company, San Joaquin Estates Mutual Water Company, Wilson Road Water Company, and the Oasis Property Owners Association into the District. The project included the annexation of these private systems into the District. As part of the project, the District will construct a groundwater well, booster pump station, water storage tank, possible water treatment facilities, and a water distribution network of approximately 10+/- miles of 8 through 12-inch water pipelines and appurtenances. The water system improvements will replace existing facilities currently operated by the private water companies. See “Project Description and Background” for further details of the Approved Project.

CEQA Documentation for the Approved Project

As Lead Agency, ENCSD adopted a Mitigated Negative Declaration (MND) for the Approved Project, and concluded that the Approved Project would not have a significant impact on the environment provided that certain mitigation measures would be incorporated into the project. These mitigation measures address issues of: aesthetics; biological resources; cultural resources; geology and soils; noise; and transportation/traffic.

In December 2016, the East Niles Community Services District filed a Notice of Determination (SCH No. 2016091046) with the State Clearinghouse and the County of Kern, as required by Section 15075 of the CEQA Guidelines.

Proposed Modified Project

Two additional service areas are now being proposed immediately adjacent to the approved project as well as an increase of about 10,700 LF in pipeline length. Inclusion of the additional service areas and additional pipelines into the Approved Project will be referred to herein as the “Modified Project”. See “Project Description and Background” for further details of the Modified Project.

Purpose/Reason for this Addendum

According to Section 15164 of the CEQA Guidelines, an addendum to the adopted Mitigated Negative Declaration (MND) may be prepared if only minor technical changes or additions to the MND are necessary to evaluate the environmental impacts of the Modified Project. This Addendum need not be circulated for public review but can be included in or attached to the adopted negative declaration. The ENCSD shall consider the Addendum with the adopted Mitigated Negative Declaration prior to making a decision on the Modified Project.

## PROJECT DESCRIPTION AND BACKGROUND

Project Title:	North Weedpatch Highway Water System Consolidation Project
Lead Agency Name and Address:	East Niles Community Services District (ENCSD) 1417 Vale Street, Bakersfield, CA 93306
Contact Person and Phone Number:	Tim Ruiz, General Manager (661) 871-2011
Project Location:	Portions of Sections 1, 11, 12, and 14 of T30S, R28E, MDB&M, and Section 7, T30S, R29E, MDB&M, south of Bakersfield in the County of Kern, California. The area is generally bounded by Redbank Road on the North, Vineland Road on the East, White Lane on the South and South Sterling Road on the West and a 1.5-acre site north of the intersection of Shirley Lane and Avenida Vicente. Refer to attached Figure 1 – Modified Project Location and Facilities.
Project sponsor's name and address:	East Niles Community Services District 1417 Vale Street, Bakersfield, CA 93306
General Plan Description:	The General Plan designations within the project limits are primarily agricultural and residential with minor areas of commercial, industrial, and mineral resource designations.
Zoning:	The portion of the project area located within the City of Bakersfield boundary is currently zoned R-1 residential. The remaining lands within Kern County are zoned for agricultural or residential uses, with small areas zoned for commercial, industrial and natural resources uses.
Description of Project:	<p><u>Presently Approved Project:</u></p> <p>As approved on November 21, 2016, the Approved Project consists of the consolidation of four private water systems onto the East Niles Community Services District (ENCSD or District) including annexation of the respective water service areas onto the District service area. As part of the approved project the District will construct a groundwater well (1,400 +/- gallons per minute [gpm] capacity), hydropneumatic tank, 420,000 +/- gallon storage tank, booster pump station, arsenic treatment facilities, and a water distribution network of approximately 10.3 miles of 8- to 12-inch diameter water pipelines and appurtenances. A pilot hole will be drilled prior to construction of the well and depending on the results of water quality sampling, arsenic and 1,2,3-Trichloropropane (TCP) treatment facilities may be added. If arsenic treatment is required it will be performed using the adsorptive media process. These new facilities will be connected to the ENCSD's existing domestic water distribution network. The water system improvements will replace existing facilities currently operated by the private water companies that cannot provide an adequate water supply to their customers. The proposed water system improvements will be designed according to the</p>

	<p>ENCSD's Water Master Plan-February 2008 and applicable local, state and federal regulations. The existing groundwater wells and pipelines for the private water systems will be abandoned in accordance with local, state, and federal requirements.</p> <p>These lands are developed with traveled roads consisting of a combination of paved roads with graded shoulders and dirt roads. The groundwater well, treatment, storage, and booster site (well site) and associated facilities will be constructed on a 1.5-acre parcel adjacent to the Shirley Lane Elementary School. This property is currently vacant and is routinely cleared of vegetation. Construction operations are anticipated to last approximately 18 months. During construction operations, anticipated construction equipment includes excavators, backhoes, loaders, water trucks, work truck, equipment and material delivery trucks, staff vehicles, concrete trucks, trenchers, pavement rollers, well drilling rig, test pump and generator, and other miscellaneous equipment. Construction operations will be concentrated at two locations. Location 1 will be along the pipeline routes. Location 2 will be at the well site located north of Shirley Lane and Avenida Vicente.</p> <p><u>Proposed Modified Project:</u> The ENCSD now proposes the following changes to the Approved Project:</p> <ul style="list-style-type: none"> <li>• Inclusion of two additional water service areas - the Victory Mutual Water Company (Victory Mutual) and Del Oro Water Company-Country Estates District (Country Estates) - into the consolidation of the ENCSD;</li> <li>• Construction of approximately two miles of additional 8- to 12-inch diameter water conveyance pipelines within these additional service areas. As with the Approved Project, water pipeline facilities will be placed within road shoulders and designated Rights-of-Way and utility easements.</li> </ul> <p>All other aspects of the Approved Project remain the same. Refer to Figure 1 – Modified Project Location and Facilities, and Engineering Design Figure 3-1 Modified Project Facilities Schematic.</p> <p>With reference to Section 15164 of the CEQA Guidelines, ENCSD considers all of these changes to be “minor technical changes or additions.” With incorporation of these changes, the project is now referred to as the “Modified Project” for the purpose of this CEQA Addendum analysis.</p>
Surrounding Land Uses and Setting;	The project area is primarily surrounded by agricultural, residential and educational facilities.
Other Public Agencies Whose Approval is Required (e.g. Permits, Financial Approval, or Participation Agreements):	City of Bakersfield, County of Kern, California Division of Drinking Water Programs, Kern Delta Water District, San Joaquin Valley Railroad, and California Department of Transportation (Caltrans)


## ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project. Refer to the checklist below for additional information.

<input checked="" type="checkbox"/>	Aesthetics	<input type="checkbox"/>	Agriculture and Forestry	<input checked="" type="checkbox"/>	Air Quality
<input checked="" type="checkbox"/>	Biological Resources	<input checked="" type="checkbox"/>	Cultural Resources	<input type="checkbox"/>	Geology/Soils
<input type="checkbox"/>	Greenhouse Gas Emissions	<input type="checkbox"/>	Hazards and Hazardous Materials	<input type="checkbox"/>	Hydrology/Water Quality
<input type="checkbox"/>	Land Use/Planning	<input type="checkbox"/>	Mineral Resources	<input checked="" type="checkbox"/>	Noise
<input type="checkbox"/>	Population/Housing	<input type="checkbox"/>	Public Services	<input type="checkbox"/>	Recreation
<input checked="" type="checkbox"/>	Transportation/Traffic	<input type="checkbox"/>	Utilities/Service Systems	<input checked="" type="checkbox"/>	Mandatory Findings of Significance

## DETERMINATION:

On the basis of this initial evaluation:

<input type="checkbox"/>	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	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.
<input type="checkbox"/>	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
<input type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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 MITIGATED NEGATIVE DECLARATION pursuant to applicable standards, and in this Addendum, and (b) have been avoided or mitigated pursuant to that earlier MITIGATED NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.
<b>Signature:</b> 	
<b>Date:</b> November 4, 2020	
<b>Printed Name:</b> Monique Roberts, PE	

## CEQA Environmental Checklist

The following Checklist, generally following the previous Initial Study format, has been prepared to determine whether the Modified Project would result in new or substantially more severe significant environmental impacts compared with the impacts of the Approved Project as disclosed in the adopted MND.

This checklist identifies physical, biological, social and economic factors that could potentially be affected by the Modified Project. For certain issues areas, new background studies were performed in connection with the Modified Project in order to assess the potential for further impacts associated with the Modified Project.

On December 28, 2018, the State Resources Agency adopted new CEQA Guidelines, which added three new environmental topics to the CEQA Initial Study checklist. As seen in the attachment titled "Environmental Topics added by the new CEQA Guidelines", the Modified Project would have no impact with regard to these three topics.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<b>I. AESTHETICS:</b> Would the Modified Project:				
a) Have a substantial adverse effect on a scenic vista	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a – As with the Approved Project, the Modified Project is not located near any scenic vistas.				
b – There are no scenic highways at or adjacent to the Modified Project area. No historic buildings will be impacted by the Modified Project.				
c – The Modified Project area is very similar to the Approved Project study area; the area is surrounded by residential uses to the north, east, and south and school sites to the west. Pipeline construction, including pipelines within the Modified Project area, will entail short-term construction of buried pipelines that will not change the visual character of the project area. No additional above-ground facilities are proposed. The previously analyzed well and tank facilities will result in a slight change to the visual character of the immediate surrounding area. To minimize this impact, the District will construct either concrete masonry unit (CMU) block walls or chain link fence walls with privacy slats around the site, and the tank facilities will be painted to match surrounding structures.				
d – The Modified Project will not create a new source of substantial light or glare. Any permanent lighting at the previously analyzed well site will be designed to minimize impacts to the adjoining neighbors to the north and east of the site. Construction of the well may require continuous well drilling operations which will require construction lighting during night time operations. This impact will be less than significant due to its short duration. All other construction activities will be performed during daylight hours.				
<u>Mitigation Measures(s)</u>				
The following Mitigation Measures, identified in the Adopted Mitigated Negative Declaration, will be incorporated into the Modified Project:				
<b>AESTH-1:</b> Construction of either CMU block walls or chain link fence with privacy slats around the well site. Structures including the tank will be painted to match surrounding structures.				
<b>AESTH-2:</b> Permanent lighting at the well site will be designed to minimize impacts to the adjoining neighbors.				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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**II. AGRICULTURE AND FOREST RESOURCES:** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the Modified Project:

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

a, b, c, d, & e – As with the Approved Project, pipeline construction for the Modified Project will take place primarily along existing road Rights-of-Way and utility easements, and on a vacant lot that is routinely cleared of vegetation. The Modified Project will not impact agriculture and forest resources. The Modified Project does not entail changes to the previously approved well site; this site is currently vacant and not farmed. The Modified Project area includes agricultural farmland; however, as with the Approved Project the Modified Project will not have a direct impact on farmland or farming operations. The Modified Project does not include any changes to zoning or land use. Forest land or timberland does not exist within the limits of the Modified Project.

Mitigation Measures

None required, as all potential impacts are less than significant.

**III. AIR QUALITY:** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Modified Project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a – The proposed modified project will not conflict nor obstruct the implementation of any air quality plans.

b, c, & d – The County of Kern, which is within the San Joaquin Valley airshed, is in a nonattainment area for Particulate Matter (PM) 10 microns or less, and PM 2.5 microns or less, and for Ozone (1-hour and 8-hour). The Modified Project will not violate air quality standards or contribute to an existing or projected air quality violation. The modified project will result in short-term construction related air pollutant emissions, particularly dust (PM10), reactive organic gases (ROG), nitrogen oxides (NOx), and carbon monoxide (CO) that may affect people near the project location. The addition of new pipeline construction for the modified project will result in an estimated 20% increase in project construction activities (i.e., an increase from approximately 55,000 linear feet [LF] of new pipeline under the Approved Project to a new estimate of 65,700 LF of new pipeline under the Modified Project). In order to minimize potential emissions impacts, the construction contractor will implement necessary BMPs as required by the San Joaquin Valley Air Pollution Control District as is standard practice for construction projects in the San Joaquin Valley.

The Valley Air District has established thresholds of significance for criteria pollutant emissions using project type and size. Projects that fall below the vehicle trips provided in the table below have been determined to have a less than significant impact on air quality due to criteria pollutants and are excluded from quantifying emissions for CEQA purposes. Activities related to construction of the Modified Project involve digging and trenching to install pipelines within residential and agricultural roads adjacent to residences and agricultural fields in active production. Construction for the Modified Project would take approximately 10 months and utilize typical construction vehicles.

Short-term air quality impacts would be associated with construction and would generally arise from dust generation and operation of equipment. The District will spray water to keep dust to minimal levels during construction, however, the area is actively farmed and complete dust suppression in the Modified Project area is unlikely.

Depending on the phase of construction, the Modified Project would utilize up to 20 construction vehicles to deliver employees and materials to the construction site or sites. If 20 vehicles traveled to and from the construction sites, making two roundtrips per vehicle, it would total 80 vehicle trips per day. Using the Valley Air District's established thresholds of significance, the Modified Project would need to make 1,673 vehicle trips per day to have a significant impact on air quality per the table below. Construction of the Modified Project would have a less than a significant impact on air quality and would not conflict with the Valley Air District's air quality plan.

#### Kern County Small Project Analysis Level by Vehicle Trips

Residential Housing	1,453 trips/day
Commercial	1,673 trips/day
Office	1,628 trips/day
Institutional	1,707 trips/day
Industrial	1,506 trips/day

The Modified Project involves digging and trenching to bury pipelines and to construct well facilities; it does not involve the use of equipment or fuels that would produce objectionable odors.

No air pollutants will be generated by the Project during the operational phase, as water will be moved by gravity or electrical pumps.

e – The Modified Project entails the same types of construction and operations as was analyzed for the Approved Project. As with the Approved Project, the Modified Project will not create objectionable odors.

#### Mitigation Measures

The following Mitigation Measures, identified in the Adopted Mitigated Negative Declaration, will be incorporated into the Modified Project:

**AIR-1:** The District will comply with all applicable air quality regulations as determined by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and will implement necessary air pollution prevention BMPs per the SJVAPCD guidelines.



IV. BIOLOGICAL RESOURCES: Would the Modified Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, 1 local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

c – There are no wetlands within the limits of construction of the Modified Project.

d – The Modified Project does not occur within or in the vicinity of a documented wildlife corridor or native wildlife nursery site. The Project does not include any permanent, aboveground infrastructure that could impede movement of native wildlife or fish species; aboveground infrastructure is limited to a small, previously disturbed vacant lot surrounded by existing development. Project impacts primarily occur along existing designated roadways and utility rights of way. Excavation work may temporarily preclude wildlife movement along portions of the rights of way, but these temporary impacts would be limited in spatial and temporal extent and the work areas can be readily circumvented by wildlife species.

e – The Modified Project does not conflict with any policies or ordinances protecting biological resources such as tree preservation plans.

f – The Modified Project will be in compliance with the Metropolitan Bakersfield Habitat Conservation Plan.

#### Mitigation Measures

The following Mitigation Measures, identified in the Adopted Mitigated Negative Declaration, will be incorporated into the Modified Project:

**BIO-1: Pre-Construction Botanical Surveys.** Prior to ground disturbance, a qualified biologist should conduct clearance surveys in potentially suitable habitats that support native vegetation to document the presence of special-status botanical species. Surveys should be conducted within the appropriate blooming season for Bakersfield cactus and San Joaquin woollythreads.

**BIO-2: Special-Status Plants Protection.** If special-status plant species are observed during botanical surveys, a no-disturbance buffer of no less than 5 feet from the edge of the root zone should be established to protect the individuals from direct impacts. If there is potential for Bakersfield cactus to occur, all cacti of the genus *Opuntia* should be identified and avoided to the extent feasible. If listed species are observed, then the appropriate agencies (CDFW, USFWS) should be consulted to determine an approved course of action.

**BIO-3: Pre-Construction Surveys.** At least 2 weeks prior to the start of construction, a qualified biologist should conduct a comprehensive pre-construction survey for special-status wildlife species within the Project footprint and buffer. If a special-status species is observed, the appropriate agencies should be contacted for consultation and to determine an approved course of action.

**BIO-4: Worker Environmental Awareness Training (WEAT).** Prior to construction, a Worker Environmental Awareness Training (WEAT) should be prepared and presented to all construction personnel at the start of Project-related activities. The training should discuss special-status species with the potential to occur within the Project footprint, including their regulatory status, description, and habitat requirements, and any sensitive habitat areas that may be encountered. The program should emphasize the importance of minimizing disturbance, and describe the federal, state, and local regulations protecting biological resources and the potential penalties for non-compliance with these laws and statutes.

**BIO-5: Biological Monitor.** If special-status wildlife species are detected within the Project area or buffer during pre-construction surveys, a qualified biological monitor should be on-site during all ground-disturbing activities, including vegetation removal. The

biological monitor should be the principal agent directing implementation of project mitigation measures, including administering the WEAT, conducting compliance monitoring and pre-construction surveys, and completing necessary reporting.

**BIO-6: Construction Materials.** All construction pipes, culverts and similar structures with a diameter of 4-inches or greater that are stored at the construction site for one or more overnight periods should be thoroughly inspected for wildlife prior to the pipes being moved, buried, capped, or otherwise used. If wildlife is observed, work in the area should stop and the pipe should not be moved; wildlife should be allowed to disperse from the area under its own volition if feasible.

If a common wildlife species is observed within a pipe or similar structure, a qualified biologist may capture the animal and relocate it to suitable habitat out of the construction area.

If a San Joaquin kit fox is observed within a pipe or similar structure, the USFWS should be notified before any action is taken. If necessary for the safety of the kit fox, under the supervision of a qualified biologist the pipe may be moved only once to remove it from the path of construction activities, until the kit fox has dispersed from the area of its own volition.

**BIO-7: Wildlife Entrapment Hazards.** Prior to construction, if feasible, exclusionary fencing (silt or construction fencing) should be installed around work areas where sensitive wildlife species have the potential to occur to prevent individuals from entering the work area.

All trenches or holes more than 18 inches in depth that are to be left open overnight should be either securely covered or have wildlife escape ramps installed during non-work hours to prevent entrapment of common and special-status wildlife species.

**BIO-8: General Site Housekeeping.** The following best management practices should be employed to protect special-status and common native wildlife.

All food-related items such as wrappers, cans, bottles, and food scraps should be disposed of in secure trash containers and removed at least once a week from the construction site.

No pets should be permitted at the construction site.

Use of rodenticides and herbicides should be restricted in Project areas to prevent primary or secondary poisoning of special-status and common wildlife species and the depletion of important prey species. If rodent control is necessary, a zinc phosphide should be employed to reduce the risk of secondary poisoning.

**BIO-9: Blunt-Nosed Leopard Lizard Protection.** Prior to the start of construction, a qualified biologist should conduct a focused reconnaissance survey for blunt-nosed leopard lizard to identify the potential seasonal presence and location of this species within the Project vicinity. If the reconnaissance survey indicates there is potential for seasonal presence of this species within the Project vicinity, specific protective measures should be developed and implemented in consultation with the CDFW and USFWS to identify and avoid and protect blunt-nosed leopard lizards in the Project vicinity. Protocol surveys should follow the methods described in the *Approved Survey Methodology for the Blunt-nosed Leopard Lizard, Revised* (CDFW 2019e).

If blunt-nosed leopard lizards are observed during pre-construction surveys within the Project footprint or buffer, the USFWS and CDFW should be consulted to determine an appropriate course of action.

If a blunt-nosed leopard lizard is encountered during Project-related work activities, all work in the vicinity that could result in the direct injury, disturbance, or harassment of the individual should immediately cease and the appropriate agencies should be notified and consulted to determine an approved course of action.

**BIO-10: Swainson's Hawk Protection.** No more than 30 days prior to construction, a qualified biologist should conduct surveys of potentially suitable nesting habitats within 1 mile of the Project Area when work is to be conducted within the breeding season (March 1 to October 1).

If active nests are identified, a no-disturbance buffer of no less than 0.25 mile should be established around the nest. The nest should be monitored by a qualified biologist until such time as it has been determined that the nest has either successfully fledged or failed.

**BIO-11: Western Burrowing Owl Protection.** Within one week prior to construction, a qualified biologist should conduct surveys of potentially suitable habitats within the work area and buffer for western burrowing owls, their burrows and sign, following the most recent survey protocol provided in the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012).

If occupied, non-breeding burrows are observed, a no-disturbance buffer of no less than 160 feet will be established around the burrow. If a burrow is located within 160 feet of the work area, the CDFW should be consulted with to determine an appropriate course of action.

If occupied, breeding burrows are observed, a no-disturbance buffer of no less than 300 feet will be established around the burrow. A qualified biologist will monitor the burrow until it has been determined that the nest has either failed or the young have fledged. If a burrow is located within 300 feet of the work area, the CDFW should be consulted with to determine an appropriate course of action.

**BIO-12: American Badger Protection.** No more than two (2) weeks prior to construction, a qualified biologist should conduct a survey for active American badger dens in potentially suitable habitats within the Project footprint and buffer.

If inactive dens are observed, the biologist should backfill the dens by hand to discourage their reuse.

If active non-natal dens are observed, a no-disturbance buffer of not less than 150 feet should be established around the den. If a den is located within 150 feet of the work area, the CDFW should be consulted to determine an appropriate course of action.

If active natal dens are observed within the work areas or in the vicinity, a no-disturbance buffer of no less than 300 feet should be established around the den. The qualified biologist should monitor the den to determine when the young have dispersed and the den has been vacated, at which point the den may be backfilled by hand to prevent re-use.

**BIO-13: San Joaquin Kit Fox Protection.** No more than two (2) weeks prior to the start of construction, a qualified biologist should conduct surveys of the work area and buffer for signs of San Joaquin kit fox. Any suitable denning locations should be investigated for use; observation of any active dens should result in consultation with the USFWS and CDFW. Surveys should be conducted following the most recent San Joaquin kit fox survey protocol provided in *San Joaquin Kit Fox Survey Protocol for the Northern Range*, established by the USFWS (1999).

San Joaquin kit fox protective measures should follow the recommendations set forth in the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011). In accordance with those recommendations, the following measures should be implemented.

If potential or known dens are identified during the pre-construction surveys, suitable no-disturbance buffers should be implemented around the dens. No-disturbance zones should be maintained throughout all construction activities and other Project-related activities that have potential to cause disturbance to the kit foxes. Only essential vehicle operation on existing roads and foot traffic should be permitted within the no-disturbance buffer. Upon completion of potentially disturbing activities, all fencing and field markers should be removed.

If a potential or atypical den is observed, a no-disturbance buffer of at least 50 feet in radius should be implemented. The no-disturbance buffer for potential or atypical dens should employ placement of 4 to 5 flagged stakes at a distance of no less than 50 feet from the den entrance.

If a known den is observed, a no-disturbance buffer of at least 100 feet in radius should be implemented. No-disturbance buffers for known dens should be demarcated by fencing that encircles the den at the appropriate distance and does not hinder kit fox access to the den site. Suitable fencing materials may include the following: untreated wood particle board, silt fencing, orange construction fencing, or other fencing as approved by the USFWS. All fencing must include openings for kit fox ingress and egress.

If an occupied or unoccupied natal/ pupping den is observed, the USFWS and CDFW will be notified to determine suitable protective measures.

If active San Joaquin kit fox dens are observed within the work area or buffer during construction activities, all work should immediately stop and the USFWS and CDFW should be notified. Protective measures for the den should follow those described above.

Disturbance to San Joaquin kit fox dens should be avoided to the extent feasible. If avoidance of the den is not possible, the den may be excavated by hand and backfilled to prevent re-use. The USFWS and CDFW should be contacted prior to the excavation of any potential or known kit fox den; take authorization may be required.

Prior to excavation, the den should be monitored for a minimum of three (3) days using a tracking medium or infra-red beam camera to ensure the den is vacant. If the den is known to be vacant, the den should be fully excavated, backfilled with native soil and compacted to ensure kit foxes cannot re-enter the den during construction activities.

Natal/pupping dens should not be disturbed or destroyed; such action requires take authorization from the USFWS and CDFW. Destruction may be authorized only after the pups and adults have naturally dispersed from the den and only after agency consultation.

If a San Joaquin kit fox is encountered during Project activities, all work that could result in a direct injury, disturbance, or harassment should immediately cease and the designated biologist should be notified.

If a San Joaquin kit fox is inadvertently entrapped, killed, or injured during Project-related activities, the CDFW and USFWS should be notified by phone immediately.

In addition to the immediate notification described above, if a San Joaquin kit fox is inadvertently injured or killed during Project-related activities, the CDFW and USFWS should be notified in writing within three (3) working days of the incident. The notification should include the date, time, and location of the incident or finding, and any other pertinent information.

**BIO-14: Tipton Kangaroo Rat Protection.** No more than two (2) weeks prior to construction, a qualified biologist should conduct surveys within the Project footprint and buffer to identify potential kangaroo rat burrows. Where potential burrows are identified, a live-trap survey should be conducted following the methods provided in the USFWS-approved *Survey Protocol for Determining Presence of San Joaquin Kangaroo Rats* (2013). If any Tipton kangaroo rats are identified during surveys, consultation with the USFWS and CDFW should be conducted to determine an approved course of action.

If any Tipton kangaroo rats are observed during work activities, all work in the vicinity should immediately stop and the appropriate agencies (CDFW, USFWS) should be contacted for consultation. If uninvestigated kangaroo rat burrows are observed during construction, work in the vicinity should stop and appropriate live-trap surveys should be conducted to confirm the species.

**BIO-15: Nesting Birds Protection.** When construction activities will occur during the migratory bird breeding season (February 1 through August 31), a qualified biologist should conduct a nesting bird survey of the Project footprint and a minimum of a 300-foot adjacent buffer no more than 1 week prior to the start of construction or vegetation clearing activities.

If any active nests are identified within the Project footprint or buffer, a no-disturbance buffer should be established, measuring no less than 300 feet for nesting raptors, and 150 feet for all other species. A qualified biologist should monitor the nest for progress, until such time as the nest has been determined to have failed or successfully fledged.

All vegetation clearing activities required by the Project should be conducted outside the breeding bird season to the extent feasible. Where vegetation clearing must be conducted within the breeding bird season, these activities should be preceded by a nesting bird survey conducted by a qualified biologist no more than one (1) week prior to the start of vegetation clearing. Vegetation clearing activities within suitable nesting bird habitat also should be monitored by a qualified biologist.

<b>V. CULTURAL RESOURCES: Would the Modified Project:</b>	<b>Potentially Significant Impact</b>	<b>Less Than Significant with Mitigation</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a, b, & c – Consultation with the Native American Heritage Commission (NAHC) and the California Historical Resource Information System (CHRIS) indicated no specific cultural resources directly within the Modified Project location (Modified Project pipeline route and well site). However, these consultations indicate the potential for cultural resources to be discovered during construction. The likelihood of encountering unknown cultural resources during construction is considered low due to the nature of the Modified Project which entails the installation of underground utilities and water facilities on previously disturbed lands.

Potential impacts to unknown cultural resources will be minimized by implementing a worker environmental training program and by conducting a reconnaissance-level cultural resources survey of the Modified Project area as recommended by local tribal members and CHRIS. Communications with the NAHC, local tribal members, and CHRIS are summarized below.

The NAHC completed a search of the Sacred Lands File for the USGS quadrangle in 2013 and 2016. The results were negative. NAHC provided a contact list for local tribes. The Tule River Indian Tribe and Kitanemuk and Yowlumne Tejon Indians have not responded to multiple contact attempts. The Tejon Indian Tribe and Santa Rosa Rancheria Tachi Yokut Tribe both recommend that a Cultural Monitoring Plan be considered or at a minimum a Cultural Presentation be given to the construction contractors. CHRIS recommended that a qualified professional archaeologist conduct a field survey of all currently vacant and previously undeveloped land in the project area prior to project activities. Additional letters sent in 2020 resulted in no new recommendations.

If any building or structures more than 45 years old will be affected as a result of project activities, they must first be recorded and evaluated for historical significance by a qualified professional architectural historian. If any archaeological resources are encountered during ground-disturbing activities, work will be temporarily halted in the vicinity of the find and a qualified archaeologist will be called to the Project site to examine and evaluate the resource in accordance with PRC Section 21083.2(i) and Section 106 of the NHPA, 16 United States Code Section 470f and its implementing regulations (36 CFR Part 800). Depending on the significance of the discovery, a program of monitoring and/or mitigation may be necessary.

d - It is not anticipated that human remains will be encountered during construction of the Modified Project. If human remains are discovered, work in the immediate vicinity of the discovery will be suspended and the Kern County Coroner will be contacted. If the remains are deemed Native American in origin, the Coroner will contact the Native American Heritage Commission and identify a Most Likely Descendant pursuant to Public Resources Code Section 5097.98 and California Code of Regulations Section 15064.5. Work may be resumed at the landowner's discretion but will only commence after consultation and treatment have been concluded. Work may continue on other parts of the proposed Project site while consultation and treatment are conducted. Compliance with existing regulations would ensure a less than significant impact to human remains.

#### Mitigation Measures

The following Mitigation Measures, identified in the Adopted Mitigated Negative Declaration, will be incorporated into the Modified Project:

**CULT-1:** Prior to construction, a qualified archeologist will develop and implement a Worker Environmental Awareness Program.

**CULT-2:** A qualified archeologist will conduct a reconnaissance level cultural resources survey of the areas within the project were ground disturbance will occur.

**VI. GEOLOGY AND SOILS:** Would the Modified Project:

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

a i-iv – The Modified Project area is located within the same geologic and soils setting as the previously analyzed Approved Project. The Modified Project site is located approximately two miles from fault zones listed in the Alquist-Priolo Earthquake Fault Zoning Map. Construction of the proposed water facilities will not increase risks to humans or property from geologic hazards. The Modified Project area is relatively flat and there is no potential for landslides.

b – The potential for erosion and loss of top soil is minimal within the Modified Project area. The contractor will mitigate potential erosion and sedimentation via the Modified Project's Storm Water Pollution Prevention Plan (SWPPP).

c & d – Construction of the Modified Project will be within developed dedicated Rights-of-Way, utility easements, and a school site. This land is not located on a geologic unit with unstable soil, or expansive soil and will not result in risk to life or property.

e – Septic systems are not part of the Modified Project.

**Mitigation Measures**

The following Mitigation Measure, identified in the Adopted Mitigated Negative Declaration, will be incorporated into the Modified Project to further reduce potential impacts:

**GEO-1:** The construction contractor will be required to develop and implement a storm water pollution prevention plan (SWPPP) in accordance with the State of California Construction General Permit Guidelines.

**VII. GREENHOUSE GAS EMISSIONS:** Would the Modified Project:

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

a & b – As with the Approved Project, the water facilities to be constructed will replace existing wells and pipelines that will be abandoned. The District will follow applicable guidelines established by the SJVAPCD in the design of project facilities. Operation of the well site and pipeline facilities will not have a significant impact on greenhouse gas emissions as these facilities will be operated with electric power. The power demand anticipated for these new facilities is anticipated to be less than the power demand to operate the existing water system wells for the private water systems that will be abandoned.

As with the Approved Project, the Modified Project will result in short-term construction-related greenhouse gas emissions. Construction GHG emissions were calculated for the Modified Project based on the increase in pipeline construction. The estimated GHG emissions for the Modified Project are shown in the attached table. The updated estimate of greenhouse gas emissions indicate that greenhouse gas emissions are anticipated to increase by 20% as compared to the Approved Project due to the approximately 20% increase in the linear feet of new pipeline construction (i.e., an increase from 55,000 LF of new pipeline construction under the Approved Project to 65,700 LF under the Modified Project). Kern County CEQA Guidelines do not provide a quantitative threshold for greenhouse gas emissions associated with construction. For the purpose of this CEQA analysis, the Modified Project's estimated CO2 emissions were compared to the County-wide forecast of annual CO2 emissions. The estimated CO2 emissions to be generated during construction of the Modified Project represents approximately 0.017% of the yearly forecasted CO2 emissions that will be generated by Kern County in 2020. Based on this calculation, the potential impact associated with CO2 emissions from the Modified Project are considered less than significant.

Mitigation Measures

None required, as all potential impacts are less than significant.

**VIII. HAZARDS AND HAZARDOUS MATERIALS:** Would the Modified Project:

		Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a & b – As with the Approved Project, the treatment process for arsenic removal, if required, may require the use of chemicals that are considered hazardous. These chemicals will be transported in drums or other DOT-approved containers, stored with appropriate secondary containment vessels, and used for the treatment process in accordance with local, state, and federal regulations applicable to the use of these chemicals. Accidental releases of hazardous materials could occur during construction activities. Any such releases will be contained and disposed of in accordance with Best Management Practices that will be outlined in the project-specific Storm Water Pollution Prevention Plan.

c – As with the Approved Project, the Modified Project will require construction in the vicinity of Shirley Lane Elementary, Fairfax Middle School, and Mira Monte High School. Diesel emissions will be generated during construction by construction equipment. In order to minimize possible impacts from these emissions, the construction contractor will implement emission reduction measures as required by the San Joaquin Valley Air Pollution Control District, as is standard practice for construction projects in the San Joaquin Valley. The impacts are not considered to be significant. Refer to the Air Quality section for additional details of potential for air quality emissions.

d – As with the Approved Project, the Department of Toxic Substances Control database indicates that the Modified Project site is not listed as a hazardous materials or former hazardous waste site. Therefore, it is not anticipated that construction will pose a threat (in terms of the release of hazardous materials) to the surrounding population.

e & f – No public or private airports are located near the Modified Project area.

g – Operations of the Modified Project will not impair implementation of or physically interfere with an adopted emergency response or evacuation plans because the project does not include the development of physical structures that would impede such a plan. However, the Modified Project could potentially affect emergency response plans and evacuation routes during construction for those residents in the immediate vicinity of the active construction sites. Alternative routes will be implemented by means of appropriate traffic control measures. The construction effort will also be coordinated with applicable agencies to ensure there will be no impairment of emergency response.

h – It is not anticipated that the Modified Project will expose any residents in the vicinity to potential wildfires.

#### Mitigation Measures

None required, as all potential impacts are less than significant.

#### **IX. HYDROLOGY AND WATER QUALITY:** Would the Modified Project:

a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a, b, & f – The Modified Project will not violate any water quality or discharge requirements. The Modified Project will not result in significant changes in use of groundwater because the new well will replace existing wells and the project area is currently developed in urban and irrigated agricultural uses. The project is intended to address the supply of potable water that does not meet current water quality standards by consolidating to the ENCSD which will be able to provide customers with potable water that meets current water quality standards.

c & d – With the exception of temporary construction related activities, the Modified Project will not produce or leave any significant physical structures that may alter or restrict existing drainage patterns in the area. As with the Approved Project, the construction contractor will address drainage through the construction site as part of the Storm Water Pollution Prevention Plan (SWPPP).

e – It is not anticipated that the Modified Project will generate a substantial amount of water from construction. As with the Approved Project, appropriate storm water pollution prevention plan measures will be implemented in accordance with the requirements of the State of California Water Resources Control Board's General Permit for Storm Water Discharges Associated with Construction and Land Disturbances Activities. Along the pipeline routes, existing surface will be returned to pre-project conditions after installation of the pipelines. At the well site, the ENCSD will construct a drainage sump to offset the minor increase in runoff flows as a result of the added structures to the site.

g, h, & i – Based on a review of the Flood Insurance Rate Map for the area, the Modified Project is not located within a 100-year flood zone. The potential for flooding as a result of failure of the proposed water storage tank is less than significant as the water contained in the storage tank would drain to the east away from existing structures and into the public storm water system. Additionally, the likely hood of a tank failure is minimal as the tank will be designed to withstand seismic events per California Building Codes.

j – There are no large bodies of water within the vicinity of the Modified Project area, therefore it is not anticipated that the project would increase the chances of flooding caused by a seiche, tsunami, or mudflow.

#### Mitigation Measures

None required, as all potential impacts are less than significant.



<b>X. LAND USE AND PLANNING:</b> Would the Modified Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a – As with the previously Approved Project, the Modified Project consists of an annexation of currently developed single family residential areas and the construction of water facilities which will not divide an established community.

b – The Modified Project is not in conflict with any applicable land use plans or policies.

c – The Modified Project is not in conflict with the Metropolitan Bakersfield Habitat Conservation Plan.

Mitigation Measures

None required, as all potential impacts are less than significant.

**XI. MINERAL RESOURCES:** Would the Modified Project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a & b – As with the previously Approved Project, construction and operations of the Modified Project will take place on the proposed well site and along improved dedicated Rights of Way. These areas are not currently used or available for mineral resources extraction.

Mitigation Measures

None required, as all potential impacts are less than significant.

**XII. NOISE:** Would the Modified Project result in:

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a, b, & d – As with the previously Approved Project, construction of the Modified Project will result in a temporary increase in noise levels created by the use of well drilling, earth moving and pipeline installation equipment. Similar to the Approved Project, the additional two miles of pipelines to be constructed for the Modified Project will be located within a combination of rural residential neighborhoods and agricultural properties. Upon completion of construction, noise levels will return to approximately pre-project levels.

Heavy construction equipment typically generates noise levels up to around 95 dbA at 50 feet. To a large extent, these types of noises are common and associated with other types of development activities. Consistent with the County of Kern and City of Bakersfield municipal codes, construction hours will be limited to daylight hours, typically between 7 a.m. and 5 p.m. During construction of the well, drilling operations may be required to be continuous day and night. This condition may result in short term impacts to residents on the north side of the well site. To minimize this impact, the well driller will be required to provide sound barriers to minimize the noise levels in the surrounding area.

c – The sound levels associated with the proposed well and booster pump station were analyzed the Approved Project. These facilities will be operated by electric motors and located inside building, which will minimize any permanent increase in noise during operation. Operational sound levels will not be affected by the addition of two service districts in the Modified Project.

e & f – There are no private or public airports in the vicinity of the Modified Project.

#### Mitigation Measures

The following Mitigation Measures, identified in the Adopted Mitigated Negative Declaration, will be incorporated into the Modified Project:

**NOISE-1:** The well drilling contractor will be required to provide sound barriers during night time well drilling operations to minimize noise levels for the adjoining neighbors.

<b>XIII. POPULATION AND HOUSING:</b> Would the Modified Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a, b, c – As with the Approved Project, the Modified Project will not directly impact population growth. The project does not require any changes in land use or zoning. The proposed water facilities are intended to serve the service areas of the six private water systems being annexed onto the District. The areas to be annexed, including the two additional service districts in the Modified Project, are currently developed in single family residential uses. Any future development within the project area would be subject to additional environmental review.				

#### Mitigation Measures

None required, as all potential impacts are less than significant.

#### **XIV. PUBLIC SERVICES:**

a) Would the Modified 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:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a – The areas to be annexed, including the two additional service districts in the Modified Project, are currently developed in single family residential uses. As with the Approved Project, emergency services (police, fire, and ambulance) and the adjacent schools may experience temporary inconveniences during construction of the Modified Project. The contractor will be required to maintain access for these services through appropriate traffic control measures. In any case, no new public facilities are required to be constructed to serve the Modified Project.

Mitigation Measures

None required, as all potential impacts are less than significant.

**XV. RECREATION:**

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

a & b – The Modified Project will not have an adverse effect on any recreational facilities, and would not require construction or expansion of recreational facilities. There are no State or local parks within the project area.

Mitigation Measures

None required, as all potential impacts are less than significant.

**XVI. TRANSPORTATION/TRAFFIC:** Would the Modified Project:

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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 District congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

a, b, c – The Modified Project will be constructed within improved dedicated Rights of Way and utility easements. The construction contractor will be required to prepare and implement a traffic control plan for use during construction operations. Construction within public road rights-of-way will be subject to the conditions of the encroachment permits issued by the affected public agencies. The project site is located in a rural area that does not experience high traffic volumes. The areas to be annexed are currently developed in single family residential uses.

d – There will be no hazards to safety from the Modified Project design features.

e – During construction, emergency access will not be obstructed. In cases of emergencies, drivers may be instructed to take alternative routes. The construction effort will be coordinated with applicable agencies to ensure there will be no impairment of emergency response.

f – The Modified Project will not interfere with the existing bus or alternative transportation routes currently in use by the City of Bakersfield or the County of Kern. Any temporary impacts to bicyclists and pedestrians will be addressed through traffic control measures.

#### Mitigation Measures

The following Mitigation Measures(s), identified in the Adopted Mitigated Negative Declaration, will be incorporated into the Modified Project:

**TRA-1:** Construction contractor will be required to develop and implement a traffic control plan in accordance with local, State, and Federal requirements.

<b>XVII. UTILITIES AND SERVICE SYSTEMS:</b> Would the Modified Project:	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a, b, c, d, e, f, & g – The Modified Project will not have adverse effects on utilities and service systems. As with the Approved Project, the Modified Project will not require or result in construction of wastewater treatment or storm drain facilities. The Modified Project involves the replacement of existing water facilities. Arsenic and TCP treatment at the well, if required, will not cause significant environmental effects as the treatment process will not produce hazardous waste. The proposed water supply, treatment, and distribution facilities are intended to serve water to the six private water systems whose water supplies currently do not meet water quality standards. No impacts to solid waste disposal are anticipated. The areas to be annexed are currently developed in single family residential uses.

#### Mitigation Measures

None required, as all potential impacts are less than significant.

# XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

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

a – There will be no impacts to aquatic resources as a result of the Modified Project. The construction area lies within dedicated improved Rights of Way, utility easements, and vacant land which is routinely cleared of vegetation. Although these lands are not suitable habitat for wildlife species, there is the possibility for wildlife species to occur in the surrounding areas which may be impacted by construction activities. Refer to the Biological Constraints Analysis for additional details on the present species and proposed mitigation measures. The Modified Project will not have significant impacts on plant species. It is not anticipated that the Modified Project will negatively affect cultural or historical resources in the surrounding area, nor are there any lasting negative impacts on the population in the vicinity of the Modified Project. Mitigation measures have been provided to limit potential impacts.

b – Considering the nature of the Modified Project consisting of the annexing of six private water systems into the ENCSD and construction of water supply, treatment (if required), and distribution facilities to replace the facilities currently operated by these water systems, there are no cumulatively considerable impacts as a result of past, current, or future projects.

c – The Modified Project will have short term impacts to humans as a result of inconveniences related to air quality, traffic, and noise caused by construction operations. These impacts are manageable and are not anticipated to be substantial adverse effects.

# EVALUATION OF FEDERAL CROSS CUTTERS

## 1. Clean Air Act:

### 1.1. Affected Environment

The Modified Project will not violate air quality standards or contribute to an existing or projected air quality violation. The Modified Project will result in short-term construction-related air pollutant emissions, particularly dust (PM10), reactive organic gases (ROG), nitrogen oxides (NOx), and carbon monoxide (CO) that may affect people residing near the project location. An estimate of CO2 emissions to be generated during construction was calculated at less than 0.017% of the yearly CO2 emissions generated by Kern County. Refer to the CO2 emissions calculation worksheet for additional details. Based on this calculation, the impact associated with CO2 emissions is less than significant.

### 1.2. Environmental Consequences

Temporary pollutant emissions as a result of construction activities.

### 1.3. Mitigation Measure

The contractor will be required to comply with BMPs in accordance with the San Joaquin Air Pollution Control District Guidelines.

## 2. Coastal Zone Management:

### 2.1. Affected Environment

The project planning area is not located in a coastal region.

### 2.2. Environmental Consequences

None.

### 2.3. Mitigation Measure

None.

## 3. Endangered Species Act (ESA):

### 3.1. Affected Environment

Because the Modified Project is located within existing road Rights-of-Way, utility easements, and vacant land that is routinely cleared of vegetation, it is unlikely that sensitive natural habitat will be disturbed. A reconnaissance-level biological survey was conducted for the Modified Project area (see attached updated Biological Resources Constraints Analysis). Although no sensitive species were found, the referenced report notes the potential presence of San Joaquin kit fox, western burrowing owl, blunt-nosed leopard lizard, Swainson's hawk, Tipton kangaroo rat, and American badger. Migratory birds may also be encountered during construction.

### 3.2. Environmental Consequences

None with implementation of mitigation measures.

### 3.3. Mitigation Measure

Mitigation measures to protect special status species include pre-construction floristic surveys and protection of special status plant species, if found. Pre-construction surveys for special status wildlife species, worker environmental awareness training, biological monitoring of any species found during the pre construction surveys, wildlife entrapment hazards protection, and protection of the wildlife special status species listed above, if found. More detailed mitigation procedures for each of the aforementioned species can be found in the attached updated Biological Resources Constraints Analysis.

## 4. Environmental Justice:

### 4.1. Affected Environment

The water system improvements will replace existing facilities currently operated by six private water companies that cannot provide an adequate water supply to their customers. The water service areas will be annexed into the ENCSD. The consolidation will provide a reliable source of clean water which is a positive development for the population currently served by these private water companies.

### 4.2. Environmental Consequences

None.

### 4.3. Mitigation Measure

None.

## 5. Farmland Protection Policy Act:

### 5.1. Affected Environment

Pipeline construction will take place within existing road Rights-of-Way and utility easements. The proposed well site is on vacant land to be purchased by the ENCSD. The property is classified as rural residential per the California Important Farmland Finder. While the project area is surrounded by agricultural farmland, the project will not have a direct impact on farmland or farming operations. The Modified Project does not include any changes to zoning or land use.

### 5.2. Environmental Consequences

None

### 5.3. Mitigation Measure

None

## 6. Flood Plain Management:

### 6.1. Affected Environment

The Modified Project is not located adjacent to any streams. The closest 100-year floodplain is located approximately one mile south of the Modified Project site.

**6.2. Environmental Consequences**

None.

**6.3. Mitigation Measure**

None.

**7. National Historic Preservation Act:**

**7.1. Affected Environment**

Consultation with the Native American Heritage Commission (NAHC) and the California Historical Resource Information System (CHRIS) indicated no specific cultural resources directly within the project location (pipeline routes and well site). These consultations indicate that there is potential for cultural resources to be discovered during construction.

**7.2. Environmental Consequences**

None with implementation of mitigation measures.

**7.3. Mitigation Measure**

Potential impacts to unknown cultural resources will be minimized by implementing a worker environmental training program and by performing a reconnaissance-level cultural survey of the area as recommended by local tribal members and CHRIS.

**8. Magnuson-Stevens Fishery Conservation and Management Act:**

**8.1. Affected Environment**

There are no essential fish habitats in the vicinity of the Modified Project. The Modified Project is located in Kern County, east of Bakersfield, far from coastal Essential Fish Habitats. Additionally, the water system improvements will replace existing facilities. This is not anticipated to induce development growth that would indirectly impact essential fish habitat.

**8.2. Environmental Consequences**

None.

**8.3. Mitigation Measure**

None.

**9. Migratory Bird Treaty Act:**

**9.1. Affected Environment**

The attached updated Biological Constraints Analysis identifies the tricolor blackbird (*Agelaius Tricolor*), great egret (*Ardea Alba*), long-eared owl (*Asio Otus*), snowy egret (*Egretta Thula*), Swainson's sawk (*Buteo swainsonii*), and western burrowing owl (*Athene Cunicularia*) as birds that were not observed but have the potential to occur within the project area.

**9.2. Environmental Consequences**

None with implementation of mitigation measures.

**9.3. Mitigation Measure**

No more than one week prior to the start of construction or vegetation clearing activities, a qualified biologist will conduct a nesting bird survey of the project area and a 300-ft buffer. If any active nests are identified within the project footprint or buffer, a no disturbance buffer will be established, measuring no less than 300 feet for nesting raptors, and 150 feet for all other species. A qualified biologist will monitor the nest for progress, until such time as the nest has been determined have failed or successfully fledged.

**10. Protection of Wetlands:**

**10.1. Affected Environment**

There are no wetlands within the limits of construction of the Modified Project.

**10.2. Environmental Consequences**

None.

**10.3. Mitigation Measure**

None.

**11. Safe Drinking Water Act, Sole Source Aquifer Protection:**

**11.1. Affected Environment**

The Modified Project is not within the boundaries of a sole source aquifer.

**11.2. Environmental Consequences**

None.

**11.3. Mitigation Measure**

None.

**12. Wild and Scenic Rivers Act:**

**12.1. Affected Environment**

The Modified Project is not located in the vicinity of a wild and scenic river. The Kern River, which is the nearest wild and scenic river, is located approximately six miles from the Modified Project area.

**12.2. Environmental Consequences**

None.

**12.3. Mitigation Measure**

None.

**13. National Forest Lands:**

**13.1. Affected Environment**

The Modified Project is not on National Forest Lands.

**13.2. Environmental Consequences**

None.

**13.3. Mitigation Measure**

None.

**14. Clean Water Act (Section 404) and River and Harbors Act (Section 10):**

**14.1. Affected Environment**

The Modified Project is not located in or near navigable waters of the United States. There will be no modification of existing structures in or near designated navigable waters. The project will not result in the placement of dredge or fill material into the waters of the United States.

**14.2. Environmental Consequences**

None.

**14.3. Mitigation Measure**

None.



## MITIGATION MEASURES

This section summarizes the mitigation measures and Best Management Practices (BMP's) that will be implemented for the Modified Project. The mitigation measures are standard practice for the majority of construction projects in the area.

Environmental Factor	Summary of Mitigation Measures and BMP's
Aesthetics	<p><b>AESTH-1:</b> Construction of either CMU block or chain link fence with privacy slats around the well site. Structures including the tank will be painted to match surrounding structures.</p> <p><b>AESTH-2:</b> Permanent lighting at the well site will be designed to minimize impacts to the adjoining neighbors.</p>
Air Quality	<p><b>AIR-1:</b> The District will comply with all applicable air quality regulations as determined by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and will implement necessary air pollution prevention BMPs per the SJVAPCD guidelines.</p>
Biological Resources	<p><b>BIO-1: Pre-Construction Botanical Surveys.</b> Prior to ground disturbance, a qualified biologist should conduct clearance surveys in potentially suitable habitats that support native vegetation to document the presence of special-status botanical species. Surveys should be conducted within the appropriate blooming season for Bakersfield cactus and San Joaquin woollythreads.</p> <p><b>BIO-2: Special-Status Plants Protection.</b> If special-status plant species are observed during botanical surveys, a no-disturbance buffer of no less than 5 feet from the edge of the root zone should be established to protect the individuals from direct impacts. If there is potential for Bakersfield cactus to occur, all cacti of the genus <i>Opuntia</i> should be identified and avoided to the extent feasible. If listed species are observed, then the appropriate agencies (CDFW, USFWS) should be consulted to determine an approved course of action.</p> <p><b>BIO-3: Pre-Construction Surveys.</b> At least two weeks prior to the start of construction, a qualified biologist should conduct a comprehensive pre-construction survey for special-status wildlife species within the Project footprint and buffer. If a special-status species is observed, the appropriate agencies should be contacted for consultation and to determine an approved course of action.</p> <p><b>BIO-4: Worker Environmental Awareness Training (WEAT).</b> Prior to construction, a Worker Environmental Awareness Training (WEAT) should be prepared and presented to all construction personnel at the start of Project-related activities. The training should discuss special-status species with the potential to occur within the Project footprint, including their regulatory status, description, and habitat requirements, and any sensitive habitat areas that may be encountered. The program should emphasize the importance of minimizing disturbance, and describe the federal, state, and local regulations protecting biological resources and the potential penalties for non-compliance with these laws and statutes.</p>

<p><b>Biological Resources</b> <b>Continued</b></p>	<p><b>BIO-5: Biological Monitor.</b> If special-status wildlife species are detected within the Project area or buffer during pre-construction surveys, a qualified biological monitor should be on-site during all ground-disturbing activities, including vegetation removal. The biological monitor should be the principal agent directing implementation of project mitigation measures, including administering the WEAT, conducting compliance monitoring and pre-construction surveys, and completing necessary reporting.</p> <p><b>BIO-6: Construction Materials.</b> All construction pipes, culverts and similar structures with a diameter of 4-inches or greater that are stored at the construction site for one or more overnight periods should be thoroughly inspected for wildlife prior to the pipes being moved, buried, capped, or otherwise used. If wildlife is observed, work in the area should stop and the pipe should not be moved; wildlife should be allowed to disperse from the area under its own volition if feasible.</p> <ul style="list-style-type: none"> <li>a. If a common wildlife species is observed within a pipe or similar structure, a qualified biologist may capture the animal and relocate it to suitable habitat out of the construction area.</li> <li>b. If a San Joaquin kit fox is observed within a pipe or similar structure, the USFWS should be notified before any action is taken. If necessary for the safety of the kit fox, under the supervision of a qualified biologist the pipe may be moved only once to remove it from the path of construction activities, until the kit fox has dispersed from the area of its own volition.</li> </ul> <p><b>BIO-7: Wildlife Entrapment Hazards.</b> Prior to construction, if feasible, exclusionary fencing (silt or construction fencing) should be installed around work areas where sensitive wildlife species have the potential to occur to prevent individuals from entering the work area.</p> <ul style="list-style-type: none"> <li>a. All trenches or holes more than 18 inches in depth that are to be left open overnight should be either securely covered or have wildlife escape ramps installed during non-work hours to prevent entrapment of common and special-status wildlife species.</li> </ul> <p><b>BIO-8: General Site Housekeeping.</b> The following best management practices should be employed to protect special-status and common native wildlife.</p> <ul style="list-style-type: none"> <li>a. All food-related items such as wrappers, cans, bottles, and food scraps should be disposed of in secure trash containers and removed at least once a week from the construction site.</li> <li>b. No pets should be permitted at the construction site.</li> <li>c. Use of rodenticides and herbicides should be restricted in Project areas to prevent primary or secondary poisoning of special-status and common wildlife species and the depletion of important prey species. If rodent control is necessary, a zinc phosphide should be employed to reduce the risk of secondary poisoning.</li> </ul> <p><b>BIO-9: Blunt-Nosed Leopard Lizard Protection.</b> Prior to the start of construction, a qualified biologist should conduct a focused reconnaissance survey for blunt-nosed leopard lizard to identify the potential seasonal presence and location of this species within the Project vicinity. If the reconnaissance survey indicates there is potential for seasonal presence of this species within the Project vicinity, specific protective measures should be developed and implemented in consultation with the CDFW and USFWS to identify and avoid and protect blunt-nosed leopard lizards in the Project vicinity. Protocol surveys should follow the methods described in the Approved Survey Methodology for</p>
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<p><b>Biological Resources</b> <b>Continued</b></p>	<p>the Blunt-nosed Leopard Lizard, Revised (CDFW 2019e).</p> <ul style="list-style-type: none"> <li>a. If blunt-nosed leopard lizards are observed during pre-construction surveys within the Project footprint or buffer, the USFWS and CDFW should be consulted to determine an appropriate course of action.</li> <li>b. If a blunt-nosed leopard lizard is encountered during Project-related work activities, all work in the vicinity that could result in the direct injury, disturbance, or harassment of the individual should immediately cease and the appropriate agencies should be notified and consulted to determine an approved course of action.</li> </ul> <p><b>BIO-10: Swainson’s Hawk Protection.</b> No more than 30 days prior to construction, a qualified biologist should conduct surveys of potentially suitable nesting habitats within 1 mile of the Project Area when work is to be conducted within the breeding season (March 1 to October 1).</p> <ul style="list-style-type: none"> <li>a. If active nests are identified, a no-disturbance buffer of no less than 0.25 mile should be established around the nest. The nest should be monitored by a qualified biologist until such time as it has been determined that the nest has either successfully fledged or failed.</li> </ul> <p><b>BIO-11: Western Burrowing Owl Protection.</b> Within one week prior to construction, a qualified biologist should conduct surveys of potentially suitable habitats within the work area and buffer for western burrowing owls, their burrows and sign, following the most recent survey protocol provided in the Staff Report on Burrowing Owl Mitigation (CDFW 2012).</p> <ul style="list-style-type: none"> <li>a. If occupied, non-breeding burrows are observed, a no-disturbance buffer of no less than 160 feet will be established around the burrow. If a burrow is located within 160 feet of the work area, the CDFW should be consulted with to determine an appropriate course of action.</li> <li>b. If occupied, breeding burrows are observed, a no-disturbance buffer of no less than 300 feet will be established around the burrow. A qualified biologist will monitor the burrow until it has been determined that the nest has either failed or the young have fledged. If a burrow is located within 300 feet of the work area, the CDFW should be consulted with to determine an appropriate course of action.</li> </ul> <p><b>BIO-12: American Badger Protection.</b> No more than two weeks prior to construction, a qualified biologist should conduct a survey for active American badger dens in potentially suitable habitats within the Project footprint and buffer.</p> <ul style="list-style-type: none"> <li>a. If inactive dens are observed, the biologist should backfill the dens by hand to discourage their reuse.</li> <li>b. If active non-natal dens are observed, a no-disturbance buffer of not less than 150 feet should be established around the den. If a den is located within 150 feet of the work area, the CDFW should be consulted to determine an appropriate course of action.</li> <li>c. If active natal dens are observed within the work areas or in the vicinity, a no-disturbance buffer of no less than 300 feet should be established around the den. The qualified biologist should monitor the den to determine when the young have dispersed and the den has been vacated, at which point the den may be backfilled by hand to prevent re-use.</li> </ul>
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<p><b>Biological Resources</b> <b>Continued</b></p>	<p><b>BIO-13: San Joaquin Kit Fox Protection.</b> No more than two weeks prior to the start of construction, a qualified biologist should conduct surveys of the work area and buffer for signs of San Joaquin kit fox. Any suitable denning locations should be investigated for use; observation of any active dens should result in consultation with the USFWS and CDFW. Surveys should be conducted following the most recent San Joaquin kit fox survey protocol provided in San Joaquin Kit Fox Survey Protocol for the Northern Range, established by the USFWS (1999).</p> <p>San Joaquin kit fox protective measures should follow the recommendations set forth in the Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011). In accordance with those recommendations, the following measures should be implemented.</p> <ul style="list-style-type: none"> <li>a. If potential or known dens are identified during the pre-construction surveys, suitable no-disturbance buffers should be implemented around the dens. No-disturbance zones should be maintained throughout all construction activities and other Project-related activities that have potential to cause disturbance to the kit foxes. Only essential vehicle operation on existing roads and foot traffic should be permitted within the no-disturbance buffer. Upon completion of potentially disturbing activities, all fencing and field markers should be removed. <ul style="list-style-type: none"> <li>i. If a potential or atypical den is observed, a no-disturbance buffer of at least 50 feet in radius should be implemented. The no-disturbance buffer for potential or atypical dens should employ placement of 4 to 5 flagged stakes at a distance of no less than 50 feet from the den entrance.</li> <li>ii. If a known den is observed, a no-disturbance buffer of at least 100 feet in radius should be implemented. No-disturbance buffers for known dens should be demarcated by fencing that encircles the den at the appropriate distance and does not hinder kit fox access to the den site. Suitable fencing materials may include the following: untreated wood particle board, silt fencing, orange construction fencing, or other fencing as approved by the USFWS. All fencing must include openings for kit fox ingress and egress.</li> <li>iii. If an occupied or unoccupied natal/ pupping den is observed, the USFWS and CDFW will be notified to determine suitable protective measures.</li> </ul> </li> <li>b. If active San Joaquin kit fox dens are observed within the work area or buffer during construction activities, all work should immediately stop and the USFWS and CDFW should be notified. Protective measures for the den should follow those described in BIO-13(a).</li> <li>c. Disturbance to San Joaquin kit fox dens should be avoided to the extent feasible. If avoidance of the den is not possible, the den may be excavated by hand and backfilled to prevent re-use. The USFWS and CDFW should be contacted prior to the excavation of any potential or known kit fox den; take authorization may be required. <ul style="list-style-type: none"> <li>i. Prior to excavation, the den should be monitored for a minimum of three (3) days using a tracking medium or infra-red beam camera to ensure the den is vacant. If the den is known to be vacant, the den should be fully excavated, backfilled with native soil and compacted to ensure kit foxes cannot re-enter the den</li> </ul> </li> </ul>
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<p><b>Biological Resources</b> <b>Continued</b></p>	<p>during construction activities.</p> <ul style="list-style-type: none"> <li>ii. Natal/pupping dens should not be disturbed or destroyed; such action requires take authorization from the USFWS and CDFW. Destruction may be authorized only after the pups and adults have naturally dispersed from the den and only after agency consultation.</li> <li>d. If a San Joaquin kit fox is encountered during Project activities, all work that could result in a direct injury, disturbance, or harassment should immediately cease and the designated biologist should be notified.</li> <li>e. If a San Joaquin kit fox is inadvertently entrapped, killed, or injured during Project-related activities, the CDFW and USFWS should be notified by phone immediately.</li> <li>f. In addition to the immediate notification described in (e), if a San Joaquin kit fox is inadvertently injured or killed during Project-related activities, the CDFW and USFWS should be notified in writing within three (3) working days of the incident. The notification should include the date, time, and location of the incident or finding, and any other pertinent information.</li> </ul> <p><b>BIO-14: Tipton Kangaroo Rat Protection.</b> No more than two weeks prior to construction, a qualified biologist should conduct surveys within the Project footprint and buffer to identify potential kangaroo rat burrows. Where potential burrows are identified, a live-trap survey should be conducted following the methods provided in the USFWS-approved Survey Protocol for Determining Presence of San Joaquin Kangaroo Rats (2013). If any Tipton kangaroo rats are identified during surveys, consultation with the USFWS and CDFW should be conducted to determine an approved course of action.</p> <ul style="list-style-type: none"> <li>a. If any Tipton kangaroo rats are observed during work activities, all work in the vicinity should immediately stop and the appropriate agencies (CDFW, USFWS) should be contacted for consultation. If uninvestigated kangaroo rat burrows are observed during construction, work in the vicinity should stop and appropriate live-trap surveys should be conducted to confirm the species.</li> </ul> <p><b>BIO-15: Nesting Birds Protection.</b> When construction activities will occur during the migratory bird breeding season (February 1 through August 31), a qualified biologist should conduct a nesting bird survey of the Project footprint and a minimum of a 300-foot adjacent buffer no more than 1 week prior to the start of construction or vegetation clearing activities.</p> <ul style="list-style-type: none"> <li>a. If any active nests are identified within the Project footprint or buffer, a no-disturbance buffer should be established, measuring no less than 300 feet for nesting raptors, and 150 feet for all other species. A qualified biologist should monitor the nest for progress, until such time as the nest has been determined to have failed or successfully fledged.</li> <li>b. All vegetation clearing activities required by the Project should be conducted outside the breeding bird season to the extent feasible. Where vegetation clearing must be conducted within the breeding bird season, these activities should be preceded by a nesting bird survey conducted by a qualified biologist no more than one week prior to the start of vegetation clearing. Vegetation clearing activities within suitable nesting bird habitat also should be monitored by a qualified biologist.</li> </ul>
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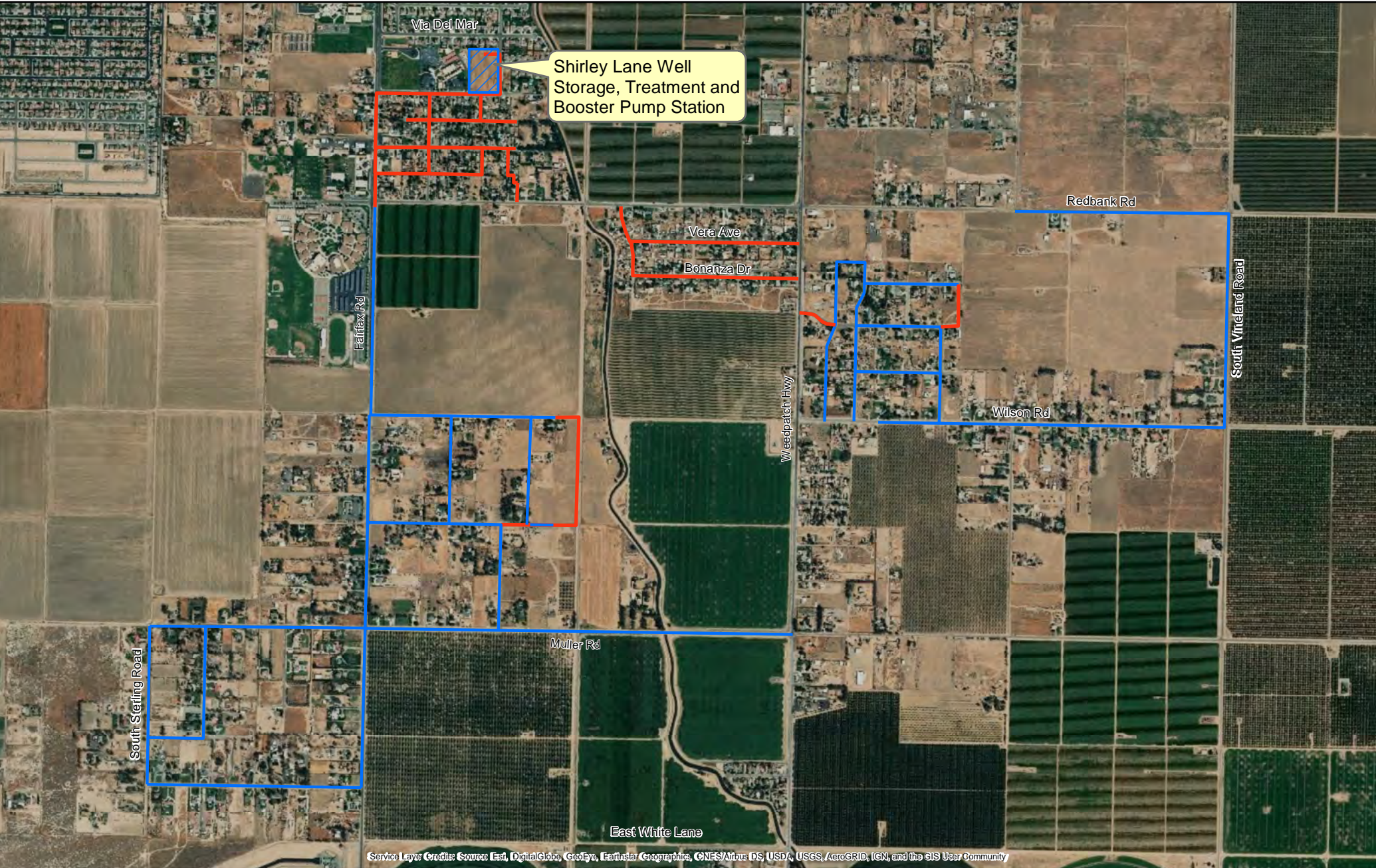
<b>Cultural</b>	<p><b>CULT-1:</b> Prior to construction, a qualified archeologist will develop and implement a Worker Environmental Awareness Program.</p> <p><b>CULT-2:</b> A qualified archeologist will conduct a reconnaissance level cultural resources survey of the areas within the project were ground disturbance will occur.</p>
<b>Geology and Soils</b>	<p><b>GEO-1:</b> Construction contractor will be required to develop and implement a storm water pollution prevention plan (SWPPP) in accordance with the State of California Construction General Permit Guidelines.</p>
<b>Noise</b>	<p><b>NOISE-1:</b> Well Drilling contractor will be required to provide sound barriers during night time well drilling operations to minimize noise levels for the adjoining neighbors.</p>
<b>Traffic</b>	<p><b>TRA-1:</b> Construction contractor will be required to develop and implement a traffic control plan in accordance with local, State, and Federal requirements.</p>

## EXHIBITS AND SUPPORTING DOCUMENTS

1. Figure 1. Modified Project Location and Facilities
2. Engineering Design Figure 3-1. Modified Project Facilities Schematic
3. CO2 Emissions Calculation Worksheet
4. Biological Resources Constraints Analysis (2020)
5. Environmental Topics added by the new CEQA Guidelines Description

## **Figure 1. Modified Project Location and Facilities**





Service Layer Credits Source Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Legend:**

- Modified Project (2019)
- Approved Project Pipeline Segments (2016)
- Approved Project Water Storage Facility Parcel (2016)

0 650 1,300 2,600 Feet

0 185 370 740 Meters

Scale: 1:19,000  
1 in = 1,583 ft

Date: 11/8/2019  
Projection: NAD 83 UTM Zone 11N



North Weedpatch Highway Consolidation Project

**Modified Project Facilities**

Project: 60615076

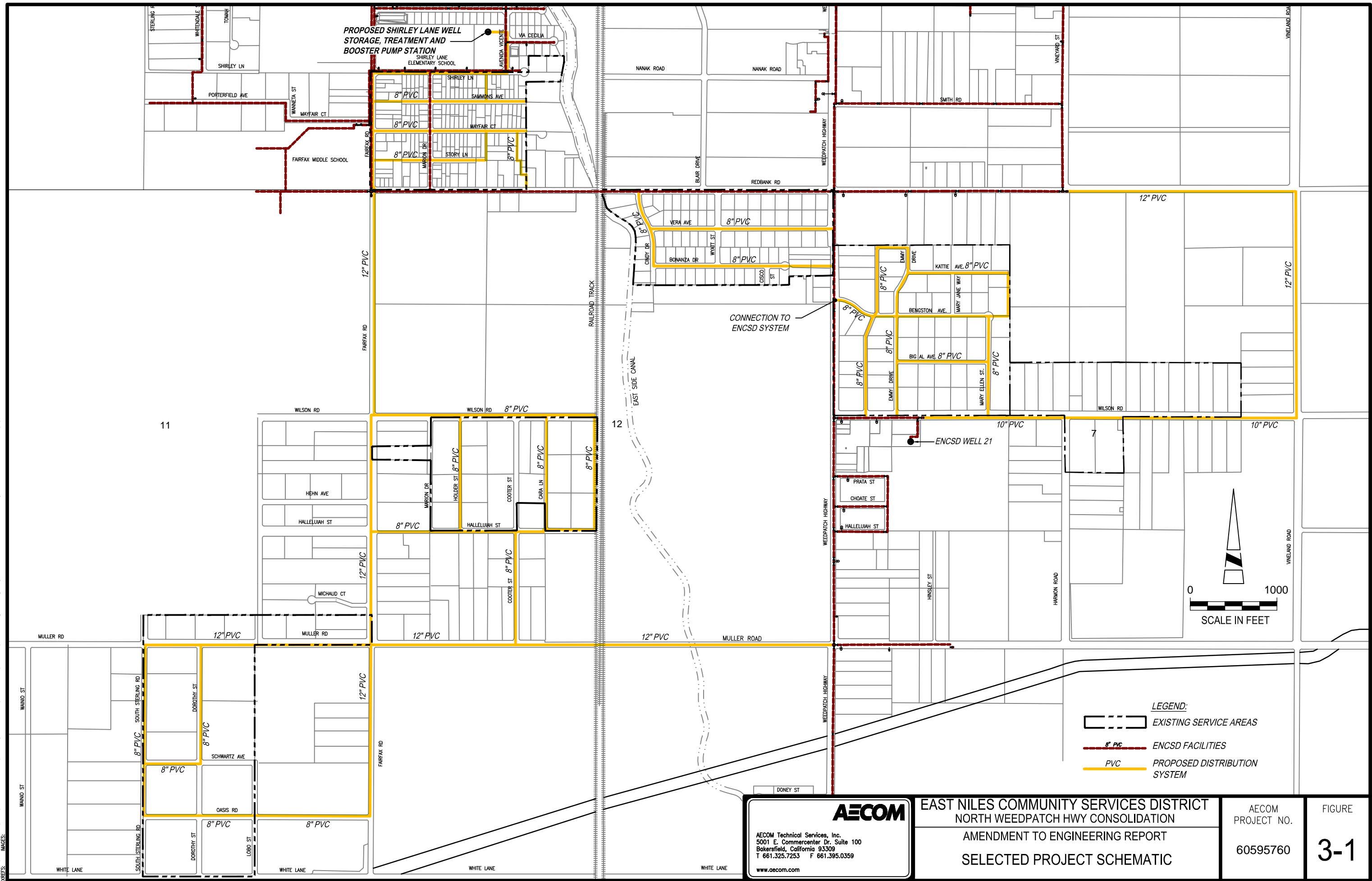


**Figure 1**



## **Engineering Design Figure 3-1. Modified Project Facilities Schematic**

D:\GIS\Self-Help Enterprises\60595760 - N Weedpatch Hwy Consolidation\900\_CAD\_GIS\910\_CAD\60595760 fig 3-1.dwg Layout Name: FIG 3-1 -- Plotted by: Chileruosi, David Date: 2/7/2019 -- 3:28 PM XREFS: WAGES:



# **CO2 Emissions Calculation Worksheet**

### CO2 Emissions Calculation Worksheet

Estimate - 20 month construction, 22 days/month, 8 hours/day

(assume majority of equipment is 175 Hp)

	No. of Equipment	Emission Factor**	Hp	Approved Project		Modified Project*	
				Hours (2016)	Metric Tons (2016)	Hours (2019)	Metric Tons (2019)
Compressor	1	273.029	175	3,168	151	3,802	182
Crane	1	244.589	175	3,168	136	3,802	163
Tractor/loader/backhoe	6	312.846	175	3,168	1,041	3,802	1,249
Roller	1	318.534	175	176	10	211	12
Paver	1	352.663	175	176	11	211	13
Other Misc.	6	352.662	175	3,168	1,173	3,802	1,408
Cement Mortar Mixers	1	415.232	50	176	4	211	4
Excavator	2	324.222	175	3,168	359	3,802	431
Generator	2	420.92	175	3,168	467	3,802	560
Grader	1	346.974	175	176	11	211	13
Test Pump	1	420.92	175	80	6	N.A.	N.A.
Trencher	1	426.608	175	1,408	105	1,690	126
Water Trucks	2	324.222	175	3,168	359	3,802	431
Drill Rig	1	426.608	175	120	9	N.A.	N.A.
<b>Total CO2 emissions</b>					<b>3,841</b>		<b>4,592</b>

\* The Approved Project includes construction of approximately 55,000 linear feet (LF) of pipeline. The Modified Project includes an additional 10,700 LF of pipeline construction (i.e., an increase of approximately 20%). The pipeline construction hours were thus increased by 20% and all other factors were held constant.

\*\* Source: URBEMIS2007 for Windows User's Guide Appendix I

N.A. Not Applicable. The equipment is for well drilling and pumping facilities. These project components are unchanged in the Modified Project.

<b>Total Kern County Annual Forecasted CO2 Emissions in 2020</b>	<b>27,272,709</b>	<b>27,272,709</b>
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Source: Kern County Communitywide Greenhouse Gas Emission Inventory, 2005 Baseline Year - 2020 Forecast, Final Report May 2012, Table 4 - Countywide Forecasted GHG Emissions Inventory for 2020

<b>Percent of Annual CO2 emissions</b>	<b>0.0141%</b>	<b>0.0168%</b>
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# **Biological Resources Constraints Analysis (2020)**

# **Biological Resources Constraints Analysis**

## **North Weedpatch Highway**

### **Consolidation Project**

**Revised January 2020**



**Prepared for:**

East Niles Community Services District  
1417 Vale Street  
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**Prepared by:**

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Santa Maria, CA

January 24, 2020

**Biological Resources Constraints Analysis**  
**North Weedpatch Highway**  
**Consolidation Project**

*Wynter K. Dawson*

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Prepared by Wynter Dawson

*Arthur Popp*

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Reviewed by Arthur Popp

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## 1.0 Introduction

The East Niles Community Services District (ENCSD) proposes to construct improvements to the existing groundwater system in the unincorporated community of Weedpatch, California. The North Weedpatch Highway Consolidation Project (Project) includes construction of a new groundwater well and a network of water distribution pipelines in the unincorporated community of Lonsmith, approximately 10 miles southeast of Bakersfield in Kern County, California (Figure 1). The ENCSD contracted AECOM to conduct biological surveys of the Project areas and prepare this Biological Resources Constraints Analysis (BRCA). The purpose of this report is to provide a general description of the existing biological resources within and adjacent to the Project footprint and determine whether any biological constraints exist within or adjacent to the Project, in compliance with the California Environmental Quality Act (CEQA).

### 1.1 Project Description

The Project includes updates and expansions to an existing water distribution system. The water system improvements will connect to the ENCSD's existing distribution network and will replace existing groundwater wells and pipelines that are currently operated by six private water companies. Four of the six service areas were previously studied, and two service areas were added in 2019.

The ENCSD proposes to construct a new groundwater well consisting of a hydropneumatic tank, 420,000-gallon storage tank, booster pump station, and arsenic treatment facilities. The footprint of these permanent aboveground structures is approximately 6,850 square feet (ft<sup>2</sup>). Reverse rotary drilling will be used to drill the groundwater well; standard open cut methods will be used to install the associated facility features. The proposed groundwater well and associated facilities will be constructed on property owned by ENCSD.

The Project also includes the construction of a water distribution network consisting of approximately 12.4 miles of 8- to 12-inch diameter PVC water pipelines. Approximately 10.4 miles were previously studied and approximately two miles were added in 2019. The new water pipelines will be installed at a depth of approximately 3 feet within existing roadway rights-of-way, which consist primarily of developed

paved roads and graded road shoulders. Pipeline installation will occur progressively via the open trench method; excavations will measure approximately 24 inches in width and slightly more than 3 feet in depth.

The distribution pipelines cross one water feature, the East Niles Water Canal, which crosses Muller Road approximately 0.30 miles west of the intersection with State Route 184 (SR 184, Weedpatch Highway; Figure 2). Jack and bore drilling will be used to install the pipeline a minimum of 5 feet beneath the invert of the canal; no disturbance of the canal banks or bed is anticipated to occur.

A total of approximately 12,100 cubic yards (cy) of material will be excavated during installation of the groundwater well, associated facilities, and distribution network. Stockpiled materials will be used for backfill; no imported soils will be needed for fill.

A crew of approximately 6 workers will conduct Project activities. Equipment will include the following:

- 1 Excavator
- 1 Loader
- 1 Backhoe
- 1 Water truck
- 2 Work trucks

Construction is anticipated to occur over a period of approximately 18 months.

### 1.2 Project Location

The Project is located in the vicinity of north SR 184, south of SR 58 (Figure 1). The proposed groundwater well is located along Avenida Vicente between Shirley Lane and Via del Mar. Construction of the water pipelines will occur along roadways east and west of SR 184, and is generally bounded by Redbank Road and Shirley Lane to the north, Vineland Road to the east, Muller Road and Oasis Avenue to the south, and Fairfax Road and South Sterling Road to the west (Figure 2).

### 1.3 Study Area

The Study Area was defined as the Project footprint, plus an additional 100-foot buffer around all Project components to allow for equipment and vehicle staging (Figure 2). At the proposed groundwater well site, the entire vacant parcel is

included to allow for as-needed equipment staging during the construction phase. The Study Area varies in elevation between 122 and 146 meters (400 to 480 feet) above mean sea level (amsl) and encompasses a total of approximately 317 acres.

## 2.0 Regulatory Setting

Biological resources including special-status species, sensitive habitats, and wetlands and waterways, are protected by several federal, State, and local laws, statutes, and regulations. The following sections provide a brief overview of the regulations applicable to the resources that occur within or adjacent to the proposed project, and their respective requirements. Permits or other authorizations that would be required under these regulations if impacts have potential to occur are noted where applicable.

### 2.1 Federal Regulations and Standards

Three federal regulations or standards that protect sensitive biological resources and habitats may apply to biological resources within the Project footprint, including the Federal Endangered Species Act (ESA), Migratory Bird Treaty Act (MBTA), and the Federal Water Pollution Control Act.

#### 2.1.1 Federal Endangered Species Act

Enacted in 1973, the Endangered Species Act (U.S. Code [U.S.C.] Title 16, Chapter 35, Sections 1531-1544) provides for the conservation of threatened and endangered species and their ecosystems. The ESA prohibits the “take” of threatened and endangered species except under certain circumstances and only with authorization from the United States Fish and Wildlife Service (USFWS) through a permit under Section 4(d), 7, or 10(a) of the ESA. Under the ESA, “take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect an individual of a listed species, or to attempt to engage in any such conduct. The ESA requires Federal agencies to make a finding on all Federal actions, including approval by an agency of a public or private action, as to the potential to jeopardize the continued existence of any listed species.

Formal consultation under Section 7 of the ESA would be required if the proposed Project has the potential to affect any federally listed species detected within or adjacent to the

proposed Project. The species included in the consultation would include: Bakersfield cactus (*Opuntia basilaris* var. *treleasei*), San Joaquin kit fox (*Vulpes macrotis mutica*), Tipton kangaroo rat (*Dipodomys nitratoideus nitratoideus*), and blunt-nosed leopard lizard (*Gambelia sila*).

#### 2.1.2 Migratory Bird Treaty Act

Congress passed the Migratory Bird Treaty Act (U.S.C. Title 16, Chapter 7, Subchapter II, sections 703-712) in 1918 to prohibit the pursuit, hunting, killing, capture, possession, purchase, barter, or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The USFWS has jurisdiction over migratory birds.

No permits are issued under the MBTA; however, the proposed Project would need to comply with measures to avoid or minimize adverse effects on nesting migratory birds. Avoidance and minimization measures to protect nesting birds are described in Section 5.0.

#### 2.1.3 Federal Water Pollution Control Act (Clean Water Act)

The Federal Water Pollution Control Act was first passed by Congress in 1948. The Act was amended in 1972 and became known as the Clean Water Act (CWA; U.S.C. Title 33, Chapter 26, Subchapters I-VI); further amendments occurred in 1977 and 1987. The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. It gives the U.S. Environmental Protection Agency (EPA) the authority to implement pollution control programs, including setting wastewater standards for industry and water quality standards for contaminants in surface waters. The CWA makes it unlawful for any person to discharge a pollutant from a point source into navigable waters without a permit under its provisions.

CWA Section 404 permits are issued by the United States Army Corps of Engineers (USACE) for dredge/fill activities within wetlands or non-wetland waters of the U.S. CWA Section 401 certifications are issued by the Regional Water Quality Control Board (RWQCB) for activities requiring a Federal permit or license which may result in discharge of pollutants into waters of the U.S.

Any proposed discharge of dredge or fill materials into Federal jurisdictional waters within or adjacent to the proposed Project would require a Section 404 permit from the USACE and a Section 401 Water Quality Certification from the RWQCB.

## 2.2 State Regulations and Standards

State regulations and standards governing the protection of the environment, water quality, and special-status species, including the California Environmental Quality Act (CEQA) and the California Endangered Species Act (CESA), may apply to the proposed Project. These regulation and standards are described in the following sections.

### 2.2.1 California Environmental Quality Act

The California Environmental Quality Act (CEQA; Public Resources Code §§21000-21177 and State CEQA Guidelines, 14 CCR §15000 et seq.) requires that biological resources be considered when assessing the environmental impacts resulting from proposed actions. The CEQA does not specifically define what constitutes an “adverse effect” on a biological resource. Instead, lead agencies are charged with determining what specifically should be considered an impact.

Appendix G of the CEQA Guidelines provides information useful for identifying whether a proposed project has the potential to adversely affect a plant or animal species identified as special-status by local or regional plans, policies or regulations, the California Department of Fish and Wildlife (CDFW), or the USFWS. In addition, impacts to plant and animal species may be considered significant if the species are identified as environmentally sensitive within the State of California and/or Kern County, regardless of formal recognition by the USFWS or the CDFW. Appendix G also recognizes the potential for a project to adversely affect riparian and other sensitive natural communities identified by local or regional plans, policies or regulations, the CDFW, or USFWS, as well as federally-protected wetlands.

### 2.2.2 California Fish and Game Code

California Fish and Game Code (Code) provides regulations for the taking or possession of birds, mammals, fish, amphibians, and reptiles, as well as regulations applying to natural resources such as wetlands and waters of the State. It includes the CESA (CFG Sections 2050-2116), which is described in

greater detail in Section 2.2.3, as well as provisions for legal hunting and fishing, and tribal agreements for activities involving take of native wildlife. The CDFW defines “take” of a species as to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

### 2.2.3 California Endangered Species Act

The CESA (CFG Division 3, Chapter 1.5, Sections 2050-2116) generally parallels the main provisions of the Federal ESA and is administered by the CDFW. The CESA prohibits the take of any species listed as threatened or endangered and upon approval from CDFW, only allows for the take of such species incidental to otherwise lawful development projects. Any proposed impact to State-listed species within the Study Area would require a permit per Section 2081 of the CFGC.

Many other wildlife species are considered by CDFW to be California Species of Special Concern and others are on a CDFW Watch List. Species of Special Concern are considered at risk of population declines that may lead to future listing, are restricted in geographic distribution, and/or are declining throughout their geographic range. Additionally, the California Natural Diversity Database (CNDDB) tracks species within California for which there is conservation concern, including many that are not formally listed, and assigns them a CNDDB Rank. Although CDFW Species of Special Concern, Watch List and species tracked by the CNDDB but not formally listed are afforded no official legal protection, they may receive special consideration during the environmental review process. CDFW further classifies some species as Fully Protected, indicating that the species may not be taken or possessed except for scientific purposes, under special permit from CDFW.

A Rare designation applies only to plant species and includes those plants that are not listed as threatened or endangered under CESA, but that could become eligible due to decreasing numbers or further restrictions to habitat.

Any proposed impact to State-listed species within or adjacent to the Proposed Project area would require an Incidental Take Permit (ITP) (Section 2081) under the CESA. It is important to note that the CDFW is unable to issue an ITP for take of any Fully Protected species, such as the blunt-nosed leopard lizard.

### 2.2.4 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (California Water Code, Division 7, Sections 13000-14958.) provides for statewide coordination of water quality regulations. This act established the California State Water Resources Control Board as the statewide authority on water quality and designated nine separate RWQCBs to oversee water quality on a day-to-day basis at the regional/local level. Proposed discharges of waste that would affect State waters (that are not Federal waters) within or adjacent to the Study Area would require a Report of Waste Discharge from RWQCB.

## 2.3 Local Regulations and Standards

In addition to federal and state regulations, counties and local communities also may have adopted regulations protecting the sensitive biological resources and habitats within their boundaries. The County of Kern (County) has adopted a General Plan, as discussed in the following section, which contains regulations and statutes pertaining to sensitive biological resources.

### 2.3.1 Kern County General Plan

The Land Use, Open Space, and Conservation Element of the Kern County General Plan (County 2009) includes local goals and policies that govern the conservation and protection of biological resources. These goals and policies must be considered by the County during the decision-making process for projects that have the potential to affect biological resources. The Kern County General Plan includes the following policies and implementation measures related to biological resources.

#### 1.10.5 Threatened and Endangered Species

Policy 27. Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.

Policy 28. The County should work closely with State and federal agencies to assure that discretionary projects avoid or minimize impacts on fish, wildlife, and botanical resources.

Policy 29. The County will seek cooperative efforts with local, State, and federal agencies to protect listed threatened and endangered plant and

wildlife species through the use of conservation plans and other methods promoting management and conservation of habitat lands.

Policy 30. The County will promote public awareness of endangered species laws to help educate property owners and the development community of local, State, and federal programs concerning endangered species conservation issues.

Policy 31. Under the provisions of CEQA, the County, as lead agency, will solicit comments from the CDFW and the USFWS when an environmental document (Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report) is prepared.

Policy 32. Riparian areas will be managed in accordance with the USACE and the CDFW rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.

#### Implementation Measures

Measure Q. Discretionary projects shall consider effects to biological resources as required by CEQA.

Measure R. Consult and consider the comments from responsible and trustee wildlife agencies when reviewing a discretionary project subject to the California Environmental Quality Act.

Measure S. Pursue the development and implementation of conservation programs with State and federal wildlife agencies for property owners desiring streamlined endangered species mitigation programs.

### 2.3.2 Metropolitan Bakersfield Habitat Conservation Plan

The Metropolitan Bakersfield Habitat Conservation Plan (HCP). was designed to acquire, preserve, and enhance native habitats which support listed and sensitive plant and wildlife species, while continuing to allow urban development as set forth in the Bakersfield 2010 General Plan. The Study Area occurs within the boundaries of this HCP; as such, the Project



may be required to pay impact fees to support habitat acquisition and management impacts to covered habitats or species result due to Project-related activities. The Project be required to abide by mitigation measures set forth in the established Incidental Take Permit (ITP) for the Metropolitan Bakersfield HCP.

### 3.0 Methods

Prior to conducting the field survey, AECOM reviewed the CNDDDB (CDFW 2019a) for records of special-status species occurrences in the vicinity of the Project. Parameters for the search included the U.S. Geological Survey (USGS) 7.5-minute quadrangle containing the Project (Lamont) and the eight adjacent 7.5-minute quadrangles. Species occurrences were reviewed within the Arvin, Conner, Edison, Gosford, Lamont, Oildale, Oil Center, Rio Bravo Ranch, and Weed Patch quadrangles.

Additionally, information from USFWS and California Native Plant Society (CNPS) sensitive species occurrence databases was reviewed. Using these database sources, a list of special-status plants and animals that have the potential to occur within the Study Area was compiled. The USFWS Critical Habitat Portal was consulted to determine the extent of any designated critical habitat units in the vicinity of the Project.

#### 3.1 Previous Surveys

AECOM biologist Amber Nichols conducted a reconnaissance-level biological field survey on June 5, 2013 to assess biological resources and potential biological constraints; this survey included the pipeline network northeast of the intersection of Fairfax Avenue and Muller Road. Results of this survey are discussed in *Biological Constraints Analysis for the North Weedpatch Highway Consolidation Project* (AECOM 2013).

Subsequent to the 2013 survey, AECOM biologist Wynter Dawson conducted a follow-up survey on June 10, 2016 to verify field conditions and to survey the new site for the proposed groundwater well and an additional network of pipelines southwest of the Fairfax Avenue-Muller Road intersection. Parallel transects spaced approximately 75 feet apart were walked throughout the proposed groundwater well site, and areas with non-native grassland within the 100-foot Project buffer were surveyed on foot with a focus on

identifying special-status species or their sign and assessing the potential for occurrence. Residential/urban portions of the pipeline distribution network were driven, and conditions were verified against the 2013 survey results. Several small through roads, including Lobo Street, Schwartz Avenue, Marion Drive, Holder Street, Cooter Street, and Cara Lane, crossed into private property and could not be surveyed in their entirety; these stretches of pipeline were visually surveyed from the north and south ends to the maximum extent feasible. Results of the 2016 survey were documented in the *Biological Constraints Analysis for the North Weedpatch Highway Consolidation Project* (AECOM 2016).

#### 3.2 2019 Survey Methodology

Methodology for the 2019 survey was identical to that employed for the 2016 survey. Ms. Dawson conducted a windshield survey of the areas previously surveyed and mapped in 2016 to verify land covers, vegetation communities, and general habitat quality that was previously documented. New project areas dominated by urban/residential land uses were also surveyed by vehicle. Meandering transects were walked throughout the proposed groundwater well site as well as new project areas dominated by vegetated habitats including non-native grasses. As in previous surveys, project areas occurring on private property with limited access were viewed from the property boundaries to the maximum extent feasible.

During the biological survey, the Study Area was surveyed for the presence of sensitive habitats, special-status plant and wildlife species, and potentially suitable habitat for special-status species. Plant species were identified to the extent feasible; due to the timing of the survey, however, many annual and perennial herbaceous species were no longer identifiable. Wildlife species observed were recorded.

Additionally, land cover types and vegetation communities within the Study Area were mapped. Land cover types were defined by their primary use; vegetation communities were defined by the dominant species present, following methodology provided in *A Manual of California Vegetation*, Second Edition (Sawyer *et. al* 2009).

Survey findings specific to each of the potentially occurring sensitive species are discussed in Section 4.4 below.

## 4.0 Survey Results

The following sections describe the results of the literature review and 2019 field survey.

### 4.1 Literature Review

A review of the CNDDDB identified records for 59 special-status plant and wildlife species within the 9-quadrangle search radius, including 28 plants, seven invertebrates, two amphibians, six reptiles, seven birds, and nine mammals (CDFW 2019a) (Figures 4a, 4b, and 5). Records for three sensitive habitats, including Great Valley cottonwood riparian forest, stabilized interior dunes, and valley saltbrush scrub, also were identified. Appendix C includes an analysis of each species' potential to occur within the Study Area based on habitat requirements and range. Due to the large search area, species with mountains or wetland habitat requirements were disregarded from further analysis due to an absence of such habitats within the Project vicinity.

No designated critical habitats occur within 15 miles of the Project (USFWS 2019a).

#### 4.1.1 Soils

The soils within the Study Area are primarily moderately alkaline, sandy loam soils formed in stream alluvium derived dominantly from granitic rock (USDA-NRCS 2019). Five soil series occur throughout the Study Area and are briefly summarized below.

##### Calflax Series

Calflax series clay loams occur in the westernmost portion of the proposed pipeline distribution system. These soils are characterized as very deep, moderately well-drained soils formed in alluvium derived from calcareous sedimentary rock. They occur on fan skirts and exhibit low runoff and moderately slow permeability. Calflax series soils occur in the southern part of the San Joaquin Valley, where they support cultivated and irrigated crops including cotton, seed alfalfa, sugar beets, and wheat, or are used for home development. Native vegetation generally consists of annual grasses, forbs, and saltbush (*Atriplex* sp.) scrub. Within the Study Area, Calflax series soils occur on slopes of 0 to 2 percent. Calflax series soils are classified as fine-loamy, mixed, superactive, thermic sodic haplocambids (USDA-NRCS 2016).

##### Delano Series

Delano series sandy loams and sandy clay loams occur throughout most of the northeast portion of the proposed pipeline distribution network. These soils are characterized as very deep, well-drained soils formed in alluvium derived from weathered grainoid rock. They occur on alluvial fans and plains, stream terraces, and fan remnants, and exhibit medium to slow runoff and moderately slow permeability. Delano series soils occur mainly in the southeastern portion of the San Joaquin Valley, California, where they are mainly used for agricultural purposes including growing citrus, fruits, nuts, and row crops; native vegetation typically consists of annual grasses and forbs. Within the Study Area, Delano series soils occur on slopes from 0 to 2 percent. Delano series soils are classified as fine-loamy, mixed, superactive, thermic xeric haplargids (USDA-NRCS 2016).

##### Hesperia

Herperia series sandy loams occur in a small portion of Kate Avenue in the northeastern portion of the Project. These soils are characterized as very deep, well-drained soils formed in alluvium derived from granite and related rocks. They occur on long, smooth alluvial fans and valley fill and exhibit negligible to low runoff and moderately rapid permeability. Hesperia series soils occur mainly in the lower San Joaquin Valley and the high desert of southern California and adjoining areas of the Southwest, and are primarily used to support desert range and for production of irrigated orchards, row crops, field crops, grain, hay, pasture, and grapes. Native vegetation consists of creosote bush scrub in the high desert, and sparse annuals in the valley. Within the Study Area, Hesperia series soils occur on slopes from 0 to 2 percent. Hesperia series soils are classified as coarse-loamy, mixed, superactive, nonacid, thermic xeric torriothents (USDA-NRCS 2016).

##### Panoche Series

Panoche series clay loams occur in a large central portion of the western half of the Project. These soils are characterized as very deep, well-drained soils that formed in loamy calcareous alluvium from sedimentary rock. They occur on alluvial fans and floodplains and exhibit negligible to medium runoff and moderate permeability. Panoche series soils are extensive through the southern part of the San Joaquin Valley, where they support irrigated crops including almonds, alfalfa, barley, cotton, and sugar beets. Dryland areas may also be

used as range following seasonal rains. Within the Project footprint, Panoche series soils occur on slopes from 0 to 2 percent. Panoche series soils are classified as fine-loamy, mixed, superactive, thermic typic haplocambids (USDA-NRCS 2016).

### Wasco Series

Wasco series sand loams occur throughout the central portion of the Study Area, including at the proposed groundwater well site. These soils are characterized as very deep, well-drained soils that form in mixed alluvium derived mainly from igneous and/or sedimentary rock. They occur on recent alluvial fans and floodplains and exhibit negligible to very low runoff and moderately rapid permeability. Wasco series soils are extensive through the southern part of the San Joaquin Valley and, to a lesser extent, the Mojave Desert. They primarily support field crops, forage, and row crops, but also may be used for grazing, wildlife habitat, recreation, and home sites. Native vegetation generally consists of saltbush scrub, and annual grasses and forbs. Wasco series soils are classified as coarse-loamy, mixed, superactive, nonacid, thermic typic torriorthents (USDA-NRCS 2016).

## 4.2 Land Cover Types and Vegetation Communities

Five land cover types and vegetation communities, including four anthropogenic land cover types and one naturalized vegetation community, occur within the Study Area. Anthropogenic land covers include agricultural, residential/urban, ruderal/previously disturbed, and water features. Non-native grassland is the only vegetation community that occurs within or adjacent to the Project footprint. Figures 3a through 3d illustrate the land cover types and vegetation communities throughout the Study Area. The land covers and communities are described in more detail below.

### Agricultural

Agricultural land use is common in the Project vicinity and occurs adjacent to Project components in several locations, most prominently along Muller Road, Fairfax Road, and Vineland Road. Agricultural areas include citrus orchards, grain fields, and vineyards, as well as active and fallow row crop fields, and the associated access roads. These areas encompass approximately 36.60 acres of the Study Area.

Vegetation within agricultural areas is generally limited to either commercially grown crops or limited ruderal species that are typically concentrated on the edges of roads and fields. Ruderal species observed included Russian thistle (*Salsola tragus*), puncture vine (*Tribulus terrestris*), black mustard (*Brassica nigra*), hairy crabgrass (*Digitaria sanguinalis*), and jimsonweed (*Datura stramonium*). The California Invasive Plant Council (Cal-IPC) considers Russian thistle, black mustard and puncture vine invasive species.

Small mammal burrows were observed at low density along the edges of some agricultural areas; the majority of these appeared to be of Botta's pocket gopher (*Thomomys bottae*), but some California ground squirrel (*Otospermophilus beecheyi*) burrows were present. Other incidental wildlife observations included common raven (*Corvus corax*), California scrub jay (*Aphelocoma californica*), and red-tailed hawk (*Buteo jamaicensis*).

### Residential/Urban

Residential and urban development areas are the dominant land cover type throughout the Project footprint, encompassing approximately 259.56 acres of the Study Area. These areas include residential, single-family homes, schools, businesses, and other commercial properties, as well as paved roadways and rights-of-way, and an existing railroad track. Residential areas generally consist of neighborhoods of single-family homes on relatively small parcels, or single-family homes on larger lots with adjacent livestock yards or pastures, empty or unused pasture areas, and small, non-commercial fruit tree stands or vineyards. Residential and urban areas include the entire proposed water pipeline distribution network.

Vegetation is highly variable in residential areas, with most species being non-native ornamentals. Trees are more abundant in residential and urban areas than in other land cover types, except for commercial orchards. Eucalyptus (*Eucalyptus* spp.), including blue gum eucalyptus (*Eucalyptus globulus*) and other species, are common singly and as visual screens and wind breaks at the edges of neighborhoods, as well as along property lines. Other native and non-native ornamental tree species, such as fan palms (*Washingtonia* spp.), Peruvian pepper tree (*Schinus molle*), and oleander (*Nerium oleander*), are common. Blue gum eucalyptus and pepper tree are considered invasive species by the Cal-IPC.



Most of these areas, however, are bare ground or maintained lawns. Limited ruderal vegetation occurs in these areas, particularly along roadway shoulders, and is consistent in species composition to that found on the edge of agricultural parcels. At the time of the survey, puncture vine, hairy crabgrass, and Russian thistle were the most common species observed, although seasonally dead non-native grasses also were present.

Domestic animals, including livestock species, are common in residential areas. Incidental wildlife observations included small mammal burrows of both pocket gopher and ground squirrels, and several urban-adapted bird species such as American crow (*Corvus brachyrhynchos*), rock dove (*Columba livia*), mourning dove (*Zenaida macroura*), and house finch (*Haemorhous mexicanus*).

#### Ruderal/Previously Disturbed

Ruderal and previously disturbed areas within the Study Area include undeveloped residential or commercial lots, and the vacant lot at the proposed groundwater well site. Ruderal and previously disturbed areas encompass approximately 8.02 acres of the Study Area.

These areas tend to be sparsely to moderately vegetated, and are typically dominated by non-native plant species, including silver leaved horsenettle (*Solanum elaeagnifolium*), chenopods (*Chenopodium* sp.), Russian thistle, black mustard, hairy crabgrass, and puncture vine. Seasonally senescent non-native grasses also were present, although most were not identifiable to species.

#### Non-Native Grassland

Non-native grasslands are not defined in *A Manual of California Vegetation*, but are characterized by the dominance of non-native grasses in the herbaceous layer. Non-native grasslands occur primarily along Redbank Road and Vineland Road in the northeast portion of the Project, with an isolated area on Muller Road; these areas may support livestock grazing, or are undeveloped parcels of land, and are generally surrounded by agricultural or residential properties. Non-native grasslands encompass approximately 12.7 acres of the Study Area.

Dominant species present may include red brome (*Bromus madritensis*), ripgut brome (*Bromus diandrus*), Mediterranean

barley (*Hordeum marinum*), hare barley (*H. murinum*), and slender wild oat (*Avena barbata*). Other herbaceous species present at low cover may include native hairy leaved sunflower (*Helianthus annuus*) and non-native jimsonweed, black mustard, and Russian thistle.

#### Water Features

Two water features occur in the vicinity of the Project. The East Side Water Canal runs roughly north-south through the Study Area and crosses the proposed pipeline distribution network at one point along Muller Road approximately 0.3 miles west of SR 184 (Figure 2 and 3d). The other feature is a small agricultural pond that occurs at the northeast corner of the Study Area (Figure 3d).

The East Side Water Canal is an approximately 30-foot wide irrigation canal with dirt and gravel banks. At Muller Road, the canal lacks emergent vegetation and its banks are very sparsely vegetated with ruderal species. On the north side of Muller Road, the canal is flanked by a dirt roadway and active agricultural fields to the east, and a dirt roadway and residential property to the west. On the south side of Muller Road, the canal is flanked by dirt roadways and active agricultural fields on both sides.

A small agricultural retention pond occurs at the northeast corner of Redbank Road and Vineland Road, at the edge of the 100-foot buffer. The pond is positioned at the southwest corner of an orchard and is presumably part of the orchard irrigation system. The pond is maintained free of emergent and bank vegetation and is bound on all sides by dirt access roads. Because this feature occurs mostly outside the Study Area and its habitat value appears to be minimal due to the lack of vegetation and presence of debris within the pond, it will not be discussed further herein.

### 4.3 Work Areas

The proposed Project consists of two primary components: the groundwater well and associated facilities, and the distribution pipeline system. The habitats present along these features are discussed further in the following sections.

#### 4.3.1 Proposed Well Site

The proposed groundwater well and associated facilities will be constructed on a vacant parcel located in a developed

residential neighborhood (Figure 3b). The parcel is located immediately east of Shirley Lane Elementary School and is bounded by paved roadways to the south and east, and a concrete brick wall to the north. Vegetation is sparse, consisting primarily of silver leaved horsenettle and Russian thistle; puncture vine and hairy crabgrass also occur at low cover. A limited number of California ground squirrel burrows occur in the vicinity, particularly around and under the existing bounding sidewalk.

### 4.3.2 Proposed Distribution Pipeline

The proposed distribution pipeline is generally limited to existing paved and dirt roadways and the associated shoulders (Figure Set 3). These areas are primarily unvegetated, although ruderal vegetation consisting of Russian thistle, black mustard, hairy crabgrass, and hairy leaved sunflower may occur. In a few instances, the distribution lines follow property lines or cross through residential areas; these stretches are uncommon, however. All areas that may be subject to direct impacts from construction of distribution lines have been previously disturbed or developed.

The associated 100-foot buffer along the distribution pipeline consists of active agricultural fields and orchards, residential/urban development, ruderal/ previously disturbed parcels, non-native grasslands, or water features. As discussed, these areas vary widely in the percent and type of vegetation cover, with bare areas being abundant. Where vegetation does occur, non-native ruderal species are generally dominant.

## 4.4 Listed and Special-Status Species Potentially Present in the Project Area

For the purposes of this BRCA, sensitive and special-status species are defined as species that are included on one or more of the following lists:

- Plant and wildlife species that are listed as threatened or endangered, or are candidates for listing as threatened or endangered, under the Federal ESA.
- Plant and wildlife species that are listed as threatened or endangered or are candidates for listing as threatened or endangered, under the CESA.
- Plant species designated by CDFW as Rare.

- Wildlife species designated by CDFW as Fully Protected, Species of Special Concern, Watch List, or species tracked by the CNDDDB.
- Plants listed by the California Native Plant Society (CNPS). The CNPS inventory is sanctioned by the CDFW and serves as the list of candidate plant species for state listing. CNPS-listed species with a California Rare Plant Rank (RPR) of 1B and 2 are considered eligible for state listing as endangered or threatened.
- Bird species listed as protected by the MBTA or listed as Birds of Conservation Concern (BCC) by the USFWS.

Special-status plant and wildlife species that have potential to occur within the Study Area, based on CNDDDB records, are listed in Table C-1 (Appendix C) and are discussed below. Species for which only extirpated records were present were excluded from the analysis. Species in Table C-1 that were determined to have very low or no potential to occur within the Study Area due to a lack of suitable habitat or other natural history requirements are included in Table C-1, but are not discussed further in this report.

A total of eight special-status plant and wildlife species were determined to have potential to occur within the Study Area, including two plant species, one reptile, two birds, and three mammals. The following sections discuss the life history characteristics of these species.

### 4.4.1 Bakersfield Cactus

Bakersfield cactus (*Opuntia basilaris* var. *treleasei*) is a federally-endangered, state-endangered, and CRPR 1B.1 species in the cactus family, Cactaceae (CDFW 2019b). Bakersfield cactus is endemic to Kern County, and its current distribution is limited to the southeast San Joaquin Valley and southern Sierra Nevada foothills within Kern County. This species blooms from April to May, and is typically found within chenopod scrub, cismontane woodland, and valley and foothill grasslands (CNPS 2019; USFWS 1998). Bakersfield cactus is found in sandy or gravelly soils at elevations between 120 and 1,140 meters (CNPS 2019).

There are no presumed extant CNDDDB records for Bakersfield cactus within 1 mile of the Study Area. The nearest known presumed extant occurrence is located approximately 2.82 miles north of the Study Area (Figure 5) (CDFW 2019a).

Annual non-native grasslands within Study Area represent potentially suitable, but low-quality habitat for the Bakersfield cactus. Most of these areas are likely subject to some form of disturbance, such as tilling, grazing, or ORV use, which reduce habitat quality for Bakersfield cactus by preventing the establishment of young cactus and damaging any mature cactus that could be present. During the reconnaissance-level survey, no Bakersfield cacti or other species of *Opuntia* were observed within the Study Area. There are no known occurrences of this species within the Study Area.

#### 4.4.2 San Joaquin Woollythreads

San Joaquin woollythreads (*Lembertia congdonii*) is a federally-endangered and CRPR 1B.2 annual herb species in the aster family, Asteraceae (CDFW 2019b). The species is endemic to California, and exists in four metapopulations and several smaller, isolated populations, including one metapopulation near Lost Hills in Kern County (USFWS 1998). It is threatened by agricultural conversion, urban development, grazing, trampling, and vehicles (CNPS 2019). San Joaquin woollythreads bloom between February and May, and typically occur in non-native grassland or chenopod scrub habitats with sandy soils (Jepson 2019, CNPS 2019). Plant species that often occur with San Joaquin woollythreads include non-native and invasive red brome, red-stemmed filaree (*Erodium cicutarium*), goldfields (*Lasthenia* spp.), Mediterranean grass (*Schismus* spp.), and fescues (*Festuca* spp.) (USFWS 1998). It may be found at elevations of 90 to 700 meters (Jepson 2019).

There is one CNDDDB record for San Joaquin woollythreads within 5 miles of the Study Area; no records occur within 1 mile (Figure 5). The nearest occurrence is a record from 1988, which is located approximately 4.95 miles north of the Study Area (CDFW 2019a).

Non-native grasslands within the Study Area represent potentially suitable habitat for San Joaquin woollythreads. Livestock grazing and ORV recreation may reduce the quality of these areas for San Joaquin woollythreads due to the recurrent disturbance associated with these land uses. No individuals were observed during field surveys, and there are no known occurrences of this species within the Study Area.

#### 4.4.3 Blunt-Nosed Leopard Lizard

Blunt-nosed leopard lizard is federally and state-listed as endangered and listed by the CDFW as Fully Protected (CDFW 2019c). The species is endemic to the San Joaquin Valley of California. The historic distribution of blunt-nosed leopard lizards is unknown, but the species is believed to have occurred in suitable habitats throughout the majority of the San Joaquin Valley and in the foothills of the Sierra Nevada and Coast Ranges. Their current documented range is limited to scattered parcels of undeveloped land on the San Joaquin Valley floor and in the surrounding foothills (USFWS 1998).

Blunt-nosed leopard lizards occur in open, sparsely vegetated areas of low relief in valley sink scrub, alkali sink scrub, valley saltbush scrub, and alkali playa habitats. Blunt-nosed leopard lizards also may occur in non-native grassland and valley needlegrass grasslands where the vegetation is short and sparse (USFWS 2019a, USFWS 2010b). They may utilize small mammal burrows, typically of ground squirrels or kangaroo rats, for shelter and to help regulate their body temperature; in areas with low rodent density, blunt-nosed leopard lizards may dig their own shallow burrows (USFWS 2010b).

Blunt-nosed leopard lizards are active during the day and forage for primarily insect prey; their diets consist primarily of crickets and grasshoppers. Other insects, as well as smaller lizards may be taken (Germano and Williams 1992). Activity is seasonal and heavily dependent on temperatures. Adults are typically active aboveground from the beginning of the breeding season in March or April through June or July; hatchlings may be active through mid-October or November if weather conditions are suitable. Clutches typically consist of 2 to 6 eggs (USFWS 1998). One to three clutches may be laid during a single breeding season; four clutches is rare (Germano and Williams 1992).

There are three CNDDDB records of blunt-nosed leopard lizards within 5 miles of the Study Area; no records occur within 1 mile of the Project (Figure 5). The nearest occurrence is from 2006 and was approximately 2.4 miles north of the Study Area (CDFW 2019a). This blunt-nosed leopard lizard occurrence was recorded within disturbed and degraded non-native grassland containing *Bromus* and *Avena* grass species.

Although blunt-nosed leopard lizards are known to occur in some non-native grassland habitats, the grasslands within the

Study Area are not expected to support blunt-nosed leopard lizards due to their relatively small size, the fragmented and isolated distribution of natural habitat in the vicinity, and the historic disturbance of these areas during past agricultural activities. The Study Area is separated from the documented occurrence by several miles of urban development, including one state highway, one railroad track, and numerous paved roads, all of which would block potential migration between the occurrence site and the Study Area. Nonetheless, the Study Area does occur within the range of this species. No blunt-nosed leopard lizards were observed during the field surveys. Given the timing of the survey, however, it is unlikely that adults would be active aboveground if present.

#### 4.4.4 Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is state-listed as threatened and is a Bird of Conservation Concern (CDFW 2019c). Swainson's hawks are uncommon summer residents in the Central Valley and other parts of California, and year-round residents in a small portion of the Sacramento Delta. Historically, the species was abundant in California, but its numbers have declined due in part to destruction of suitable nesting habitat (CDFW 2019d).

Swainson's hawks occur in open habitats, including grassland, oak savannah, prairie, and open pine-oak woodland habitats, as well as in agricultural and cultivated areas with scattered tree stands (Ehrlich *et. al* 1988). Nests are built in stands of a few large trees, or small groves, located near suitable foraging habitat including grasslands, grain or alfalfa fields, or livestock pastures. Breeding generally commences in late March and ends by late August, with a peak from late May through July (CDFW 2019d). One clutch of two or three eggs is laid (Ehrlich *et. al* 1988).

During the breeding season, Swainson's hawks forage for primarily mammalian prey, including ground squirrels, gophers, mice, voles, and rabbits; bats, snakes, lizards, and other birds also may be taken. Outside the breeding season, their diet shifts to include more insect prey, especially crickets, grasshoppers, dragonflies, butterflies, moths, and beetles (Cornell 2019).

There is one CNDDDB record of Swainson's hawk within 5 miles of the Study Area, and no records within 1 mile of the Study Area (Figure 5). The nearest occurrence was recorded in 1935

and is located approximately 4.3 miles northeast of the Study Area (CDFW 2019a).

Potentially suitable Swainson's hawk foraging habitat is present in the non-native grassland and agricultural parcels within the Study Area. Suitable breeding habitat may be present within large trees associated with residential properties in the vicinity. Numerous small mammals were observed during the field surveys, which represent potentially suitable prey items. No Swainson's hawks or potential Swainson's hawk nests were observed during the field surveys.

#### 4.4.5 Western Burrowing Owl

The western burrowing owl (*Athene cunicularia*) is a California Species of Special Concern and a Bird of Conservation Concern (CDFW 2019c). Burrowing owls occur year-round in the San Joaquin Valley and southwestern regions of California, and may winter along the coast and in the Coast Ranges (CDFW 2019d). Although this species still inhabits large portions of its historic range, it is negatively impacted by habitat loss due to agricultural and urban development, habitat degradation, and reduction in burrowing mammal populations (Klute *et. al* 2003).

Burrowing owls occur in open, dry grassland and desert habitats, and areas with low vegetation in agricultural fields. Burrowing owls prefer to utilize burrows dug by other species, especially ground squirrels, for nesting, but they may dig their own burrows in soft, friable soils. Pipes and culverts, piles of rock, concrete debris, nest boxes, or other materials may be used for nesting and habitation where burrows are scarce (CDFW 2019d).

Burrowing owls are active at any time of day or night, and typically forage for a variety of invertebrates, including crickets and grasshoppers, beetles, scorpions and centipedes, and earwigs; small rodents such as voles (*Microtus* sp.) and mice, small birds, and lizards also may be taken (Peeters 2007). Breeding occurs from March through August, with a peak in April and May. Clutches average 5 to 6 eggs, and young fledge about 4 weeks after hatching (CDFW 2019d).

There are 12 CNDDDB records of burrowing owl within 5 miles of the Study Area; three of those records occur within 1 mile of the Study Area, and one overlaps the Project (Figure 5). This occurrence was recorded in 2007 and is along Sterling Road, south of Muller Road (CDFW 2019a).



The non-native grassland, agricultural parcels, and some of the larger ruderal/previously disturbed areas within the Study Area provide potentially suitable burrowing owl habitat. Numerous small mammal burrows, some potentially large enough for burrowing owls to utilize, were observed within the Study Area in non-native grasslands along the northern side of Redbank Road. Recent records of the species within the Project footprint and in the vicinity support the potential for this species to occur. No burrowing owls or signs of burrowing owls, including pellets, burrows, or tracks, were observed during field surveys.

#### 4.4.6 American Badger

The American badger (*Taxidea taxus*) is a large member of the mustelid family and designated as a California Species of Special Concern (CDFW 2019c). American badgers occur in suitable habitats throughout the majority of California, being absent only in the farthest northern coastal region of the state (CDFW 2019d). They inhabit open spaces in grassland and shrubland habitats, where trees are sparse and dry, and friable soils occur (Eder 2005). Badgers often dig their own dens for shelter, but also may appropriate ground squirrel (*Otospermophilus* spp.) tunnels, and frequently reuse old burrows (CDFW 2019d).

Badgers are carnivores, and their diet is primarily composed of burrowing small mammals, including ground squirrels, pocket gophers (*Thomomys* spp.), and jackrabbits (*Lepus* spp.); bird eggs and young, mice, reptiles, insects, and amphibians, as well as carrion also may be consumed (Eder 2005). Breeding occurs in summer and early fall; one to five, typically four, pups are born in March and April. Young disperse in the fall (Eder 2005).

There are two CNDDDB records of American badger within 5 miles of the Study Area; one of these occurrences is located within 1 mile of the Project (Figure 5). The nearest record is from 1900 and occurs approximately 0.3 miles northwest of the Study Area; this is a geographically non-specific record with a 5-mile radius. No other records for American badger are located within 5 miles of the Study Area (CDFW 2019a).

Natural habitat in the vicinity of the Project is highly fragmented by residential and commercial areas, developed roadways, and active agricultural parcels. Although non-native grasslands adjacent to the Project may contain suitable habitat

and observations suggests that suitable prey species are present, the low density of prey species, small relative area of these grasslands to other more developed land cover types, and high degree of disturbance in adjacent areas make it unlikely that American badgers utilize these grasslands for denning or habitation. However, these areas may be utilized as movement corridors between more distant suitable habitats. No American badgers or signs of American badgers (dens, evidence of digging or burrowing, tracks, or scat) were observed within the Study Area during field survey.

#### 4.4.7 San Joaquin Kit Fox

The San Joaquin kit fox is federally-listed as endangered and state-listed as threatened (CDFW 2019c). Historically, its distribution included most of the San Joaquin Valley, from southern Kern County north to the Sacramento Delta (USFWS 1998). The current distribution of the San Joaquin kit fox is limited to the remaining natural lands of the San Joaquin Valley floor and the surrounding foothills of the coastal ranges, Sierra Nevada, and Tehachapi Mountains.

San Joaquin kit foxes inhabit annual grasslands and sparsely vegetated shrubby habitats, including alkali sink scrub, and valley saltbush and sink scrub habitats. They also may be found in grazing grasslands, oil fields, urban areas, and adjacent to active agricultural fields. Kit foxes prefer areas with loose-textured soils but may be found on any soil type (Morrell 1972; USFWS 1998).

Kit foxes use complex dens for shelter, protection, temperature regulation, and reproduction. Kit foxes may dig their own dens, modify and use dens constructed by other animals, or utilize man-made structures such as culverts, abandoned pipes, and sump or roadbed banks. Dens typically have multiple entrances and often are located in flat terrain and are commonly located within washes, drainages, and roadside berms. Dens are generally scarce in areas with shallow soils (USFWS 1998).

San Joaquin kit foxes are primarily nocturnal. They prey primarily upon rodents, including kangaroo rats (*Dipodomys* sp.) and pocket mice (*Perognathus* sp.); ground-nesting birds and insects also are taken, and some vegetation, especially grasses, may be ingested (Jameson and Peeters 2004). Mating typically occurs from late December to March; litters of between two and six pups are born between February and late

March. Both parents help care for the pups. Young may disperse from their natal dens in August and September or may remain with their parents for one year to help raise the next litter (USFWS 1998).

There are 17 CNDDB records of San Joaquin kit fox with 5 miles of the Study Area. Of these, three occur within 1 mile of the Study Area (Figure 5). The nearest record is from 1971, and occurs approximately 0.41 miles south of the southwest corner of the Study Area (CDFW 2019a).

The annual non-native grasslands within the Study Area represent potentially suitable habitat for the San Joaquin kit fox and support suitable prey species. San Joaquin kit foxes are known to utilize agricultural and urban areas both permanently and as transitory habitats. No San Joaquin kit foxes or signs of San Joaquin kit foxes (dens, tracks, scats, evidence of predation) were observed during the field surveys.

#### 4.4.8 Tipton Kangaroo Rat

The Tipton kangaroo rat is federally and state-listed as endangered (CDFW 2019c). It is one of three subspecies of the San Joaquin kangaroo rat (*Dipodomys nitratooides*). Historically, Tipton kangaroo rats are thought to have occurred on the floor of the Tulare Basin, from the southern margins of Tulare Lake eastward and southward along the edge of the Valley floor, an area of approximately 687,650 hectares. The current range has been reduced to only about 4 percent of the historic range, and consists of scattered, isolated patches of habitat (USFWS 2010a).

Tipton kangaroo rats inhabit arid areas with level or nearly level terrain with friable soils from fine sands through clay-sized particles, including on alluvial fans and floodplains. Suitable habitats consist of sparse, scattered woody shrubs with a ground cover of annual grasses and forbs; permanent occupancy requires areas not be subject to flooding (USFWS 1998, USFWS 2010a). Potential habitats include valley saltbush scrub and other saltbush scrub habitats, iodine bush shrubland, and interior dune grassland. Burrow systems dug by the kangaroo rats are utilized for shelter (Eder 2005), and are typically less than 10 inches deep (USFWS 2010a).

Tipton kangaroo rats are nocturnal and forage primarily for seeds and grains, but will take small amounts of green, herbaceous material and may supplement their diet with insects (USFWS 1998). Breeding occurs in the winter, and

peaks in late March or early April; litters typically consist of two pups, which wean within 24 days (BLM 2016).

There is one CNDDB record of Tipton kangaroo rat within 5 miles of the Study Area (Figure 5). This occurrence was recorded in 1999 and is located approximately 2.5 miles northeast of the Study Area (CDFW 2019c).

High quality Tipton kangaroo rat habitat consisting of sparsely-vegetated scrub communities was not identified within the Study Area; however, there is limited potential for this species to occur in the non-native grasslands within the Study Area. Numerous small mammal burrows were observed within the non-native grasslands of the Study Area; the majority of these were identified as pocket gopher or California ground squirrel burrows. No tail drags or other sign of kangaroo rats were observed within the Study Area during surveys.

## 5.0 Biological Constraints Analysis and Recommended Mitigation Measures

The purpose of this analysis is to identify sensitive biological resources that may be temporarily or permanently impacted by the proposed Project. For the purposes of this analysis, construction is assumed to be limited to the described Project footprint (Section 1.1), with most impacts occurring in developed properties, existing roadways and road shoulders, and on previously disturbed lands (Figure Set 3).

The following sections discuss the biological constraints that are or may be present within the Study Area, with a focus on the sensitive habitats or special-status species that may be impacted by Project activities. Where there are concerns about impacts on a sensitive biological resource due to Project-related activities, recommended mitigation measures to avoid or reduce these effects are provided.

### 5.1 Biological Constraints Present or With Potential to Occur

Field surveys of the Study Area did not identify any sensitive habitats within the Project boundaries or associated buffer. No special-status plant or wildlife species, or signs of any such species, were observed within the Study Area. However, several special-status species may have potential to occur

based on the presence of suitable habitats and other life history requirements.

### 5.1.1 Sensitive Habitats

Habitats within the Study Area and the nearby surroundings are primarily developed or previously disturbed, with smaller areas of non-native grasslands. Sensitive habitats that occur within the Study Area or its vicinity will be avoided by Project-related activities.

There are no wetlands within the vicinity of the Project.

### 5.1.2 Waterways

One water feature, the Eastside Canal, occurs within the Study Area and will be crossed by the distribution pipeline. The canal is large and unvegetated, and does not provide suitable habitat for special-status plant and wildlife species. Additionally, its banks are regularly maintained by the water district. Direct and indirect impacts to this waterway due to Project-related activities are not anticipated. Boring methods will be used to install the pipeline at least 5 feet beneath the bed of the canal, avoiding all impacts to the canal banks. Applicable Best Management Practices (BMPs) and implementation of sedimentation control devices as required by the County will avoid indirect impacts to the canal.

### 5.1.3 Sensitive Plant Species

Two sensitive-status plant species, Bakersfield cactus and San Joaquin woollythreads, were identified as having potential to occur within the Project area based on the presence of potentially suitable habitat; however, neither Bakersfield cactus nor San Joaquin woollythreads are expected to occur as the Project is distal to any documented extant populations of these species. Further, Project impacts are expected to be limited to established roadways and road shoulders and developed properties, which do not provide suitable habitat for these species.

Nonetheless, should these or any other special-status plant species occur within the Study Area, direct and indirect impacts to individuals and suitable habitat may result due to Project activities. Direct impacts may include the removal of individuals which occur within the work areas, and the temporary removal of potentially suitable habitat during the construction phase of the Project, where construction occurs

adjacent to the non-native grasslands. Indirect impacts may include the accumulation of fugitive dust in adjacent habitats and the potential for increased sedimentation or erosion in edge habitats. These indirect impacts would be temporary in nature; conditions would return to pre-construction levels following completion of the Project. Mitigation measures will further protect these species from impacts.

To avoid direct and indirect impacts to Bakersfield cactus, San Joaquin woollythreads and other special-status plant species, clearance surveys for special-status plant species should be conducted prior to construction in potentially suitable habitats that may support native vegetation.

### Recommended Mitigation Measures:

**BIO-1. Pre-Construction Botanical Surveys.** Prior to ground disturbance, a qualified biologist should conduct clearance surveys in potentially suitable habitats that support native vegetation to document the presence of special-status botanical species. Surveys should be conducted within the appropriate blooming season for Bakersfield cactus and San Joaquin woollythreads.

**BIO-2. Special-Status Plants Protection.** If special-status plant species are observed during botanical surveys, a no-disturbance buffer of no less than 5 feet from the edge of the root zone should be established to protect the individuals from direct impacts. If there is potential for Bakersfield cactus to occur, all cacti of the genus *Opuntia* should be identified and avoided to the extent feasible. If listed species are observed, then the appropriate agencies (CDFW, USFWS) should be consulted to determine an approved course of action.

### 5.1.4 Sensitive Wildlife Species

Special-status wildlife species with the potential to occur within the Study Area include blunt-nosed leopard lizard, Swainson's hawk, western burrowing owl, American badger, San Joaquin kit fox, and Tipton kangaroo rat. Of these, only western burrowing owls have been documented within the Study Area in the past. Additionally, vegetation within the non-native grasslands and previously-disturbed areas, as well as structures associated with the residential/urban areas and trees within active orchards, may provide suitable habitat for nesting birds protected under the MBTA. Ground-nesting species may occur where vegetation is sparse. No nesting birds

were observed during the field surveys, but several native species were observed using the Study Area and may nest in it. Mitigation measures are included for these species, although many are not expected to occur based on a lack of quality, connected, or continuous habitat.

Direct impacts to special-status wildlife species would include potential injury or mortality due to collisions with heavy equipment during construction. Although larger mammal species, such as American badgers and San Joaquin kit fox, as well as adult birds are highly mobile and likely would be able to avoid collisions, small fossorial species, such as Tipton kangaroo rats and blunt-nosed leopard lizards, as well as hatchling birds, eggs, and nests, would be susceptible to injury or mortality if they occur within the Project work areas. Project activities will be limited to established roads and road shoulders and other previously disturbed areas that are not expected to provide suitable habitat for these species. Other direct impacts include the temporary removal of habitat during the construction phase. Again, poor-quality habitat within the work areas minimize this impact.

Indirect impacts to wildlife species due to Project-related activities may include the temporary removal of foraging habitat, increased noise generated during Project activities and increased human presence, as well as a potential increase in fugitive dust. For predator species, indirect impacts also may include shifts in the presence of prey species due to these disturbances. All of these impacts are expected to be temporary and will be minimal as most of the work occurs along existing, active roads and in existing urban neighborhoods where vehicular traffic is common. Individuals living in these areas are likely to be accustomed to some degree of vehicular traffic, noise, and human presence. Mitigation measures will further protect these species from impacts.

#### Recommended Mitigation Measures:

**BIO-3. Pre-Construction Surveys.** At least 2 weeks prior to the start of construction, a qualified biologist should conduct a comprehensive pre-construction survey for special-status wildlife species within the Project footprint and buffer. If a special-status species is observed, the appropriate agencies should be contacted for consultation and to determine an approved course of action.

#### BIO-4. Worker Environmental Awareness Training (WEAT).

Prior to construction, a Worker Environmental Awareness Training (WEAT) should be prepared and presented to all construction personnel at the start of Project-related activities. The training should discuss special-status species with the potential to occur within the Project footprint, including their regulatory status, description, and habitat requirements, and any sensitive habitat areas that may be encountered. The program should emphasize the importance of minimizing disturbance, and describe the federal, state, and local regulations protecting biological resources and the potential penalties for non-compliance with these laws and statutes.

**BIO-5. Biological Monitor.** If special-status wildlife species are detected within the Project area or buffer during pre-construction surveys, a qualified biological monitor should be on-site during all ground-disturbing activities, including vegetation removal. The biological monitor should be the principal agent directing implementation of project mitigation measures, including administering the WEAT, conducting compliance monitoring and pre-construction surveys, and completing necessary reporting.

**BIO-6. Construction Materials.** All construction pipes, culverts and similar structures with a diameter of 4-inches or greater that are stored at the construction site for one or more overnight periods should be thoroughly inspected for wildlife prior to the pipes being moved, buried, capped, or otherwise used. If wildlife is observed, work in the area should stop and the pipe should not be moved; wildlife should be allowed to disperse from the area under its own volition if feasible.

- a. If a common wildlife species is observed within a pipe or similar structure, a qualified biologist may capture the animal and relocate it to suitable habitat out of the construction area.
- b. If a San Joaquin kit fox is observed within a pipe or similar structure, the USFWS should be notified before any action is taken. If necessary for the safety of the kit fox, under the supervision of a qualified biologist the pipe may be moved only once to remove it from the path of



construction activities, until the kit fox has dispersed from the area of its own volition.

**BIO-7. Wildlife Entrapment Hazards.** Prior to construction, if feasible, exclusionary fencing (silt or construction fencing) should be installed around work areas where sensitive wildlife species have the potential to occur to prevent individuals from entering the work area.

- All trenches or holes more than 18 inches in depth that are to be left open overnight should be either securely covered or have wildlife escape ramps installed during non-work hours to prevent entrapment of common and special-status wildlife species.

**BIO-8. General Site Housekeeping.** The following best management practices should be employed to protect special-status and common native wildlife.

- a. All food-related items such as wrappers, cans, bottles, and food scraps should be disposed of in secure trash containers and removed at least once a week from the construction site.
- b. No pets should be permitted at the construction site.
- c. Use of rodenticides and herbicides should be restricted in Project areas to prevent primary or secondary poisoning of special-status and common wildlife species and the depletion of important prey species. If rodent control is necessary, a zinc phosphide should be employed to reduce the risk of secondary poisoning.

**BIO-9. Blunt-Nosed Leopard Lizard Protection.** Prior to the start of construction, a qualified biologist should conduct a focused reconnaissance survey for blunt-nosed leopard lizard to identify the potential seasonal presence and location of this species within the Project vicinity. If the reconnaissance survey indicates there is potential for seasonal presence of this species within the Project vicinity, specific protective measures should be developed and implemented in consultation with the CDFW and USFWS to identify and avoid and protect blunt-nosed leopard lizards in the Project vicinity. Protocol surveys should follow the methods described in the *Approved Survey Methodology for the Blunt-nosed Leopard Lizard, Revised* (CDFW 2019e).

a. If blunt-nosed leopard lizards are observed during pre-construction surveys within the Project footprint or buffer, the USFWS and CDFW should be consulted to determine an appropriate course of action.

b. If a blunt-nosed leopard lizard is encountered during Project-related work activities, all work in the vicinity that could result in the direct injury, disturbance, or harassment of the individual should immediately cease and the appropriate agencies should be notified and consulted to determine an approved course of action.

**BIO-10. Swainson's Hawk Protection.** No more than 30 days prior to construction, a qualified biologist should conduct surveys of potentially suitable nesting habitats within 1 mile of the Project Area when work is to be conducted within the breeding season (March 1 to October 1).

a. If active nests are identified, a no-disturbance buffer of no less than 0.25 mile should be established around the nest. The nest should be monitored by a qualified biologist until such time as it has been determined that the nest has either successfully fledged or failed.

**BIO-11. Western Burrowing Owl Protection.** Within one week prior to construction, a qualified biologist should conduct surveys of potentially suitable habitats within the work area and buffer for western burrowing owls, their burrows and sign, following the most recent survey protocol provided in the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012).

a. If occupied, non-breeding burrows are observed, a no-disturbance buffer of no less than 160 feet will be established around the burrow. If a burrow is located within 160 feet of the work area, the CDFW should be consulted with to determine an appropriate course of action.

b. If occupied, breeding burrows are observed, a no-disturbance buffer of no less than 300 feet will be established around the burrow. A qualified biologist will monitor the burrow until it has been determined that the nest has either failed or the young have fledged. If a burrow is

located within 300 feet of the work area, the CDFW should be consulted with to determine an appropriate course of action.

**BIO-12. American Badger Protection.** No more than two (2) weeks prior to construction, a qualified biologist should conduct a survey for active American badger dens in potentially suitable habitats within the Project footprint and buffer.

- a. If inactive dens are observed, the biologist should backfill the dens by hand to discourage their reuse.
- b. If active non-natal dens are observed, a no-disturbance buffer of not less than 150 feet should be established around the den. If a den is located within 150 feet of the work area, the CDFW should be consulted to determine an appropriate course of action.
- c. If active natal dens are observed within the work areas or in the vicinity, a no-disturbance buffer of no less than 300 feet should be established around the den. The qualified biologist should monitor the den to determine when the young have dispersed and the den has been vacated, at which point the den may be backfilled by hand to prevent re-use.

**BIO-13. San Joaquin Kit Fox Protection.** No more than two (2) weeks prior to the start of construction, a qualified biologist should conduct surveys of the work area and buffer for signs of San Joaquin kit fox. Any suitable denning locations should be investigated for use; observation of any active dens should result in consultation with the USFWS and CDFW. Surveys should be conducted following the most recent San Joaquin kit fox survey protocol provided in *San Joaquin Kit Fox Survey Protocol for the Northern Range*, established by the USFWS (1999).

San Joaquin kit fox protective measures should follow the recommendations set forth in the *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011). In accordance with those recommendations, the following measures should be implemented.

- a. If potential or known dens are identified during the pre-construction surveys, suitable no-disturbance buffers should be implemented around the dens. No-disturbance zones should be maintained throughout all construction activities and other Project-related activities that have potential to cause disturbance to the kit foxes. Only essential vehicle operation on existing roads and foot traffic should be permitted within the no-disturbance buffer. Upon completion of potentially disturbing activities, all fencing and field markers should be removed.
  - i. If a potential or atypical den is observed, a no-disturbance buffer of at least 50 feet in radius should be implemented. The no-disturbance buffer for potential or atypical dens should employ placement of 4 to 5 flagged stakes at a distance of no less than 50 feet from the den entrance.
  - ii. If a known den is observed, a no-disturbance buffer of at least 100 feet in radius should be implemented. No-disturbance buffers for known dens should be demarcated by fencing that encircles the den at the appropriate distance and does not hinder kit fox access to the den site. Suitable fencing materials may include the following: untreated wood particle board, silt fencing, orange construction fencing, or other fencing as approved by the USFWS. All fencing must include openings for kit fox ingress and egress.
  - iii. If an occupied or unoccupied natal/pupping den is observed, the USFWS and CDFW will be notified to determine suitable protective measures.
- b. If active San Joaquin kit fox dens are observed within the work area or buffer during construction activities, all work should immediately stop and the USFWS and CDFW should be notified. Protective measures for the den should follow those described in BIO-13(a).

- c. Disturbance to San Joaquin kit fox dens should be avoided to the extent feasible. If avoidance of the den is not possible, the den may be excavated by hand and backfilled to prevent re-use. The USFWS and CDFW should be contacted prior to the excavation of any potential or known kit fox den; take authorization may be required.
  - i. Prior to excavation, the den should be monitored for a minimum of three (3) days using a tracking medium or infra-red beam camera to ensure the den is vacant. If the den is known to be vacant, the den should be fully excavated, backfilled with native soil and compacted to ensure kit foxes cannot re-enter the den during construction activities.
  - ii. Natal/pupping dens should not be disturbed or destroyed; such action requires take authorization from the USFWS and CDFW. Destruction may be authorized only after the pups and adults have naturally dispersed from the den and only after agency consultation.
- d. If a San Joaquin kit fox is encountered during Project activities, all work that could result in a direct injury, disturbance, or harassment should immediately cease and the designated biologist should be notified.
- e. If a San Joaquin kit fox is inadvertently entrapped, killed, or injured during Project-related activities, the CDFW and USFWS should be notified by phone immediately.
- f. In addition to the immediate notification described in (e), if a San Joaquin kit fox is inadvertently injured or killed during Project-related activities, the CDFW and USFWS should be notified in writing within three (3) working days of the incident. The notification should include the date, time, and location of the incident or finding, and any other pertinent information.

**BIO-14. Tipton Kangaroo Rat Protection.** No more than two (2) weeks prior to construction, a qualified biologist

should conduct surveys within the Project footprint and buffer to identify potential kangaroo rat burrows. Where potential burrows are identified, a live-trap survey should be conducted following the methods provided in the USFWS-approved *Survey Protocol for Determining Presence of San Joaquin Kangaroo Rats* (2013). If any Tipton kangaroo rats are identified during surveys, consultation with the USFWS and CDFW should be conducted to determine an approved course of action.

- a. If any Tipton kangaroo rats are observed during work activities, all work in the vicinity should immediately stop and the appropriate agencies (CDFW, USFWS) should be contacted for consultation. If uninvestigated kangaroo rat burrows are observed during construction, work in the vicinity should stop and appropriate live-trap surveys should be conducted to confirm the species.

**BIO-15. Nesting Birds Protection.** When construction activities will occur during the migratory bird breeding season (February 1 through August 31), a qualified biologist should conduct a nesting bird survey of the Project footprint and a minimum of a 300-foot adjacent buffer no more than 1 week prior to the start of construction or vegetation clearing activities.

- a. If any active nests are identified within the Project footprint or buffer, a no-disturbance buffer should be established, measuring no less than 300 feet for nesting raptors, and 150 feet for all other species. A qualified biologist should monitor the nest for progress, until such time as the nest has been determined to have failed or successfully fledged.
- b. All vegetation clearing activities required by the Project should be conducted outside the breeding bird season to the extent feasible. Where vegetation clearing must be conducted within the breeding bird season, these activities should be preceded by a nesting bird survey conducted by a qualified biologist no more than one (1) week prior to the start of vegetation clearing. Vegetation clearing activities within suitable nesting bird habitat also should be monitored by a qualified biologist.

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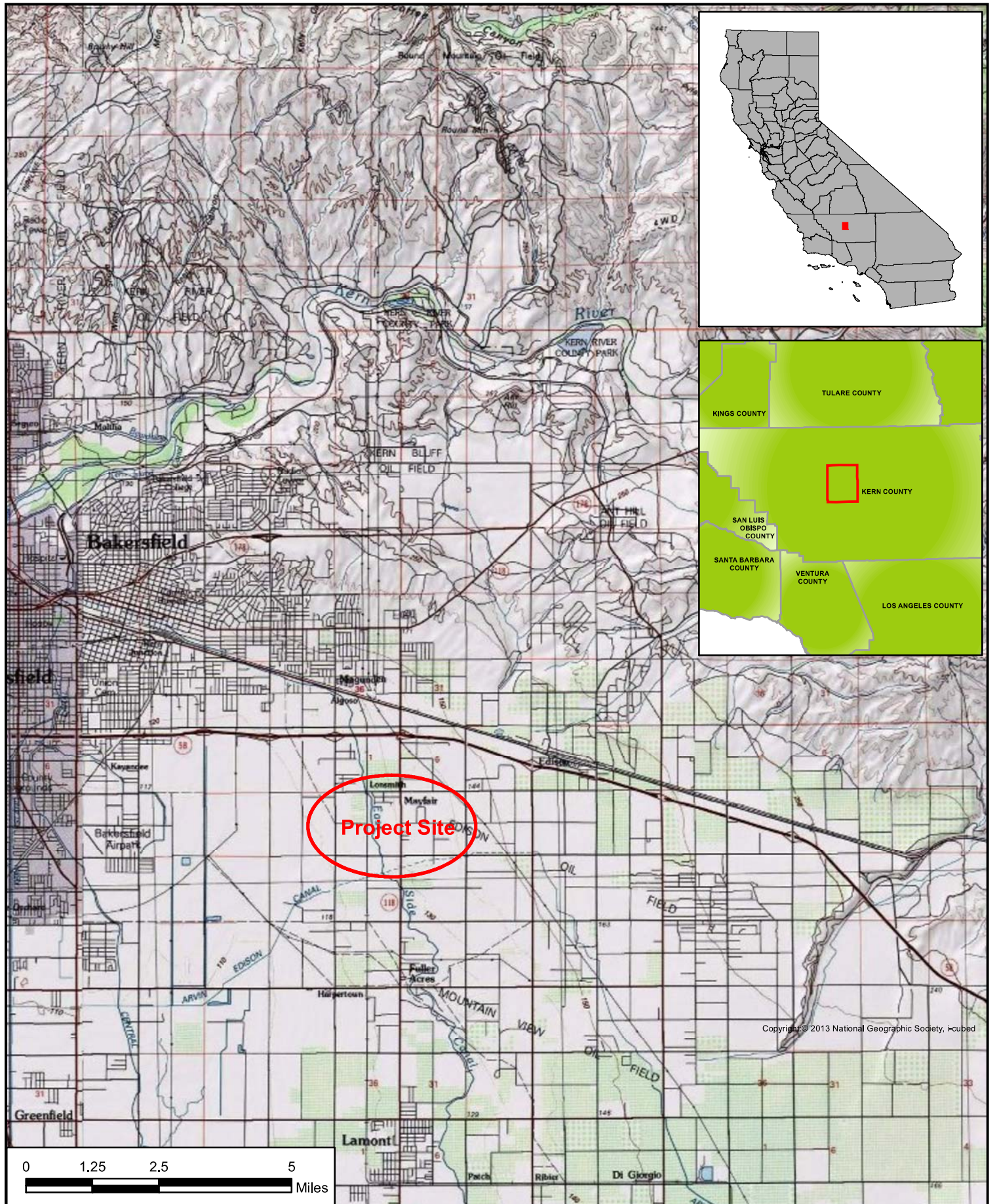
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## Figures





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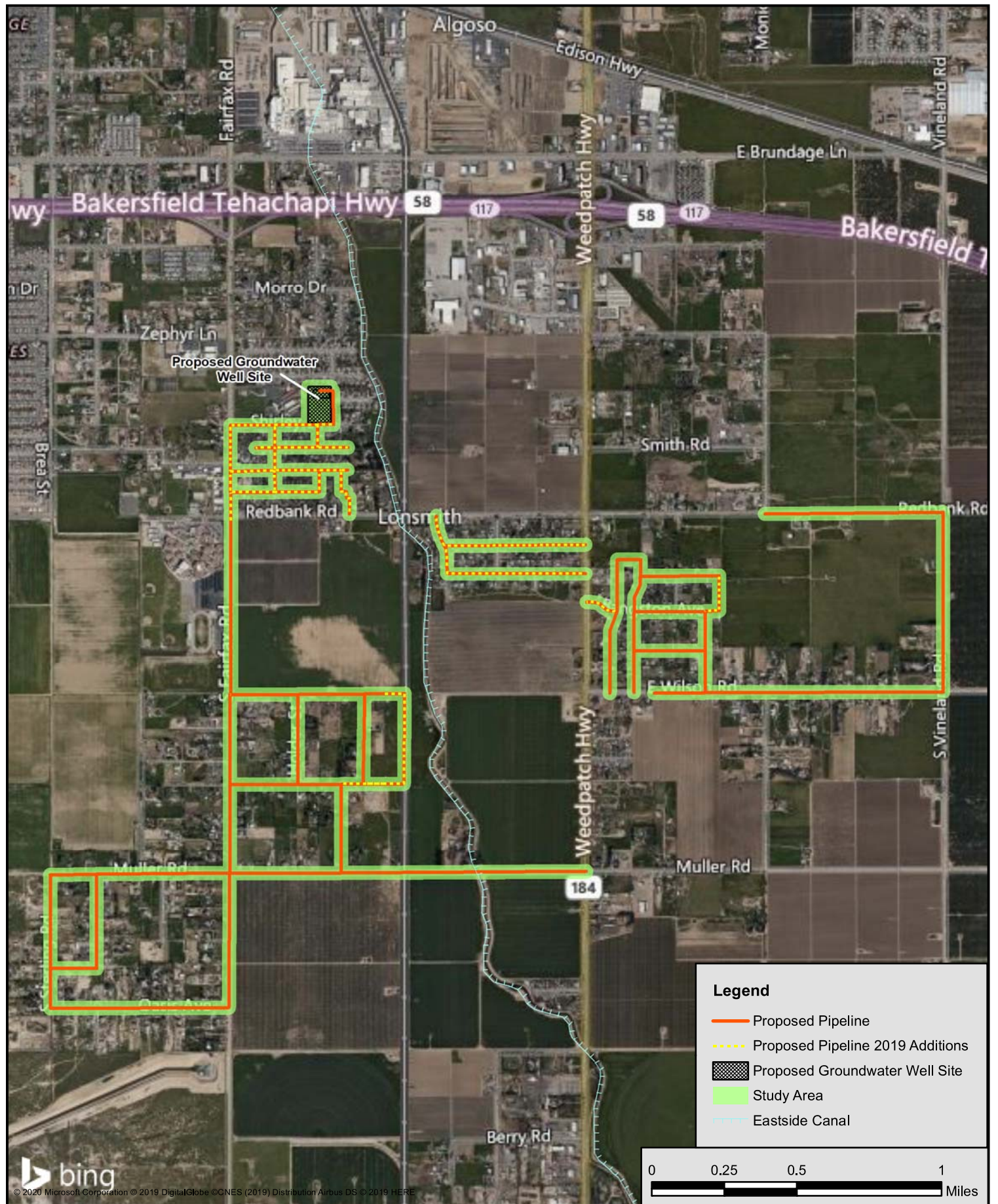


EAST NILES CSD  
NORTH WEEDPATCH HIGHWAY  
CONSOLIDATION PROJECT

**Project Location  
Figure 1**







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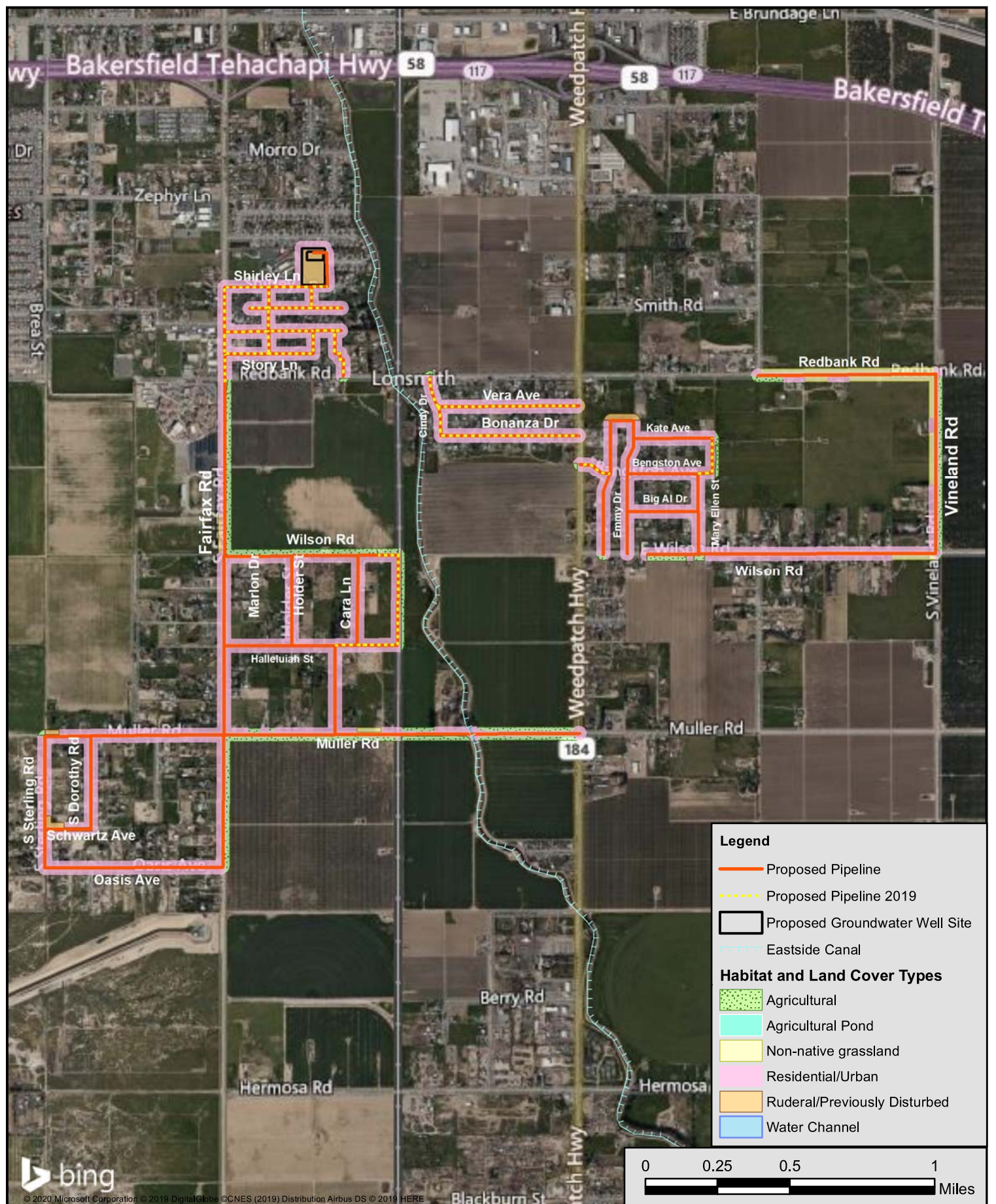
EAST NILES CSD  
NORTH WEEDPATCH HIGHWAY  
CONSOLIDATION PROJECT

Project Site and Study Area  
Figure 2





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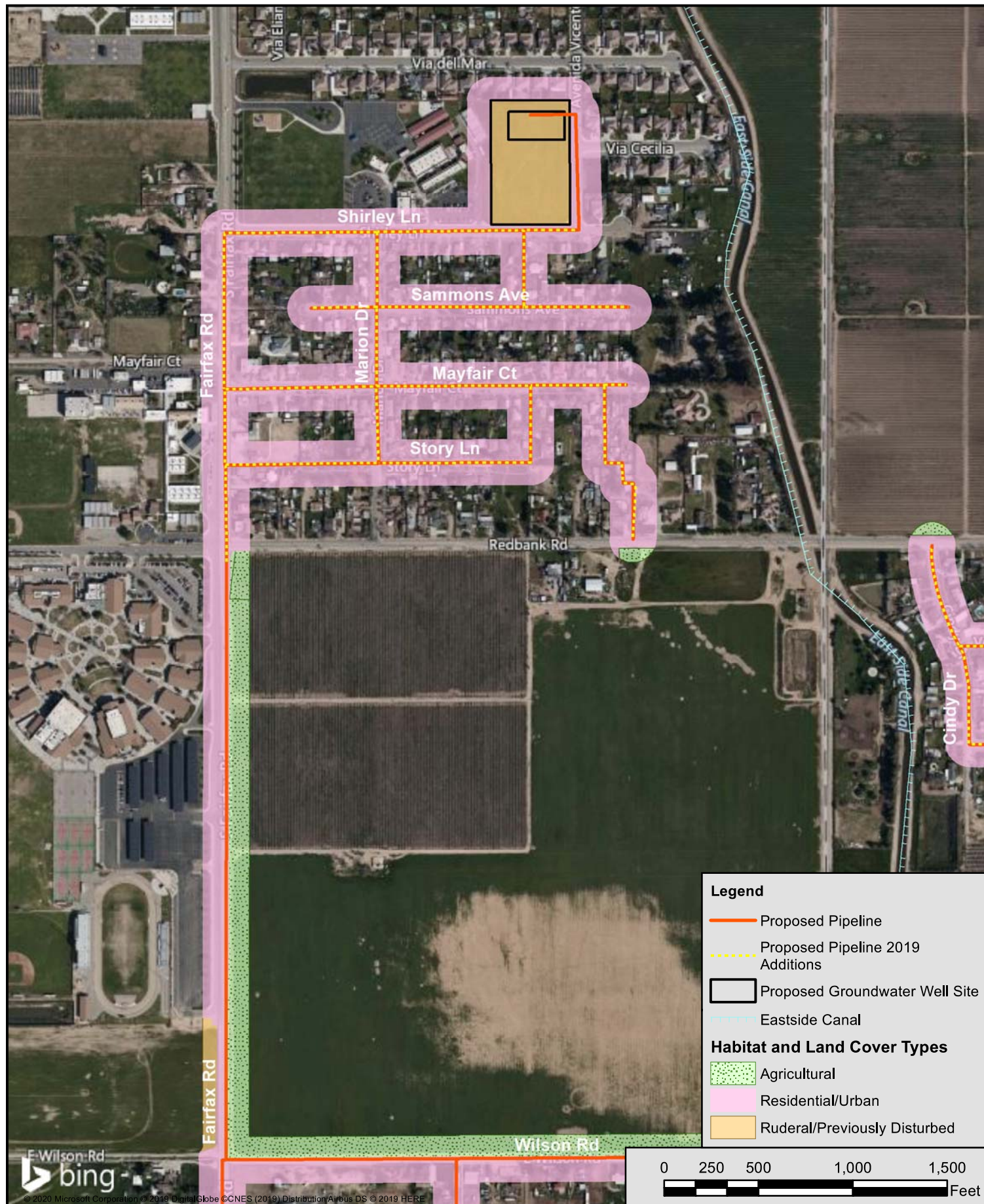
EAST NILES CSD  
NORTH WEEDPATCH HIGHWAY  
CONSOLIDATION PROJECT

Habitat and Land Cover Types  
Study Area  
Figure 3a





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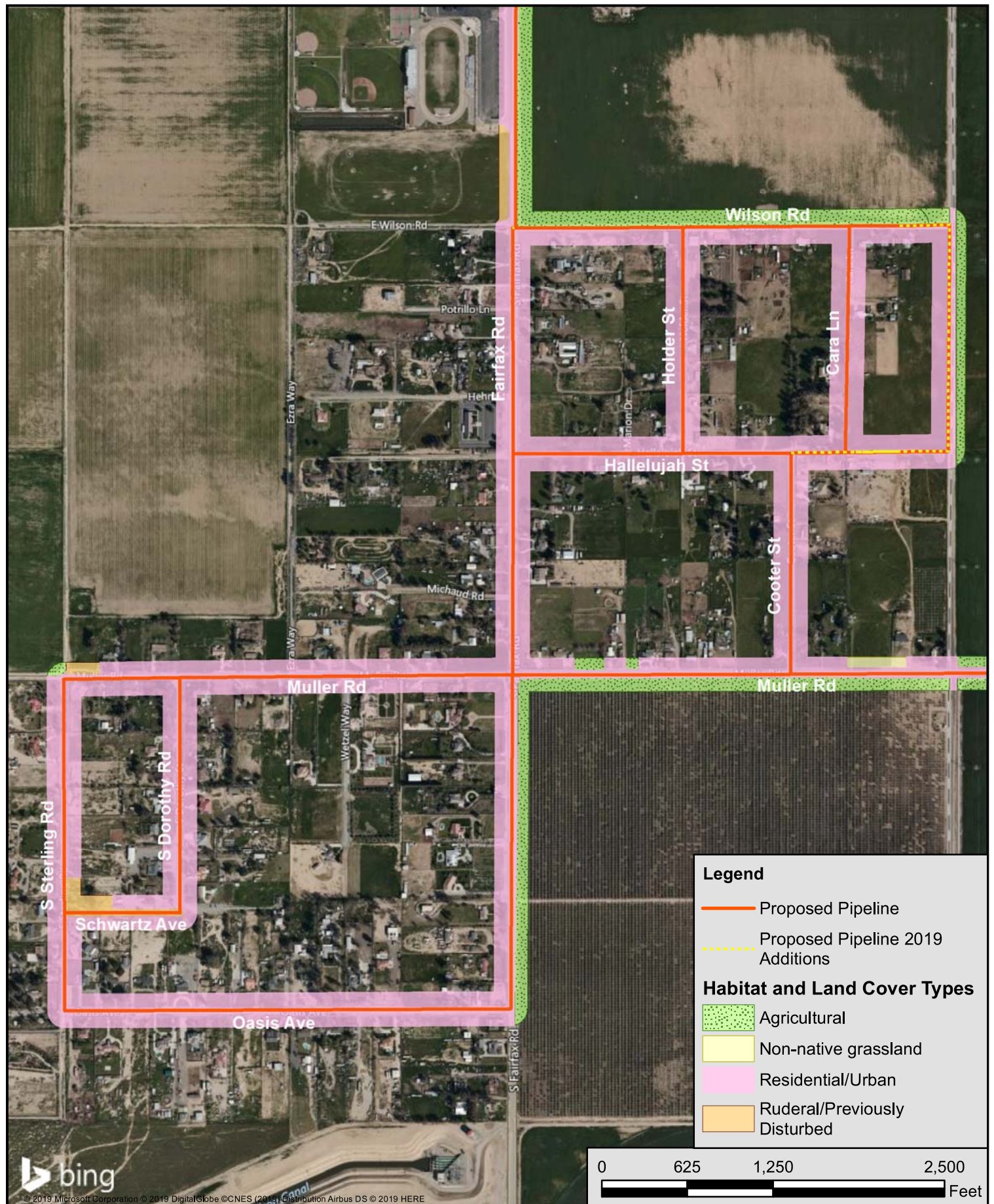
EAST NILES CSD  
NORTH WEEDPATCH HIGHWAY  
CONSOLIDATION PROJECT

**Habitat and Land Cover Types  
North Study Area  
Figure 3b**





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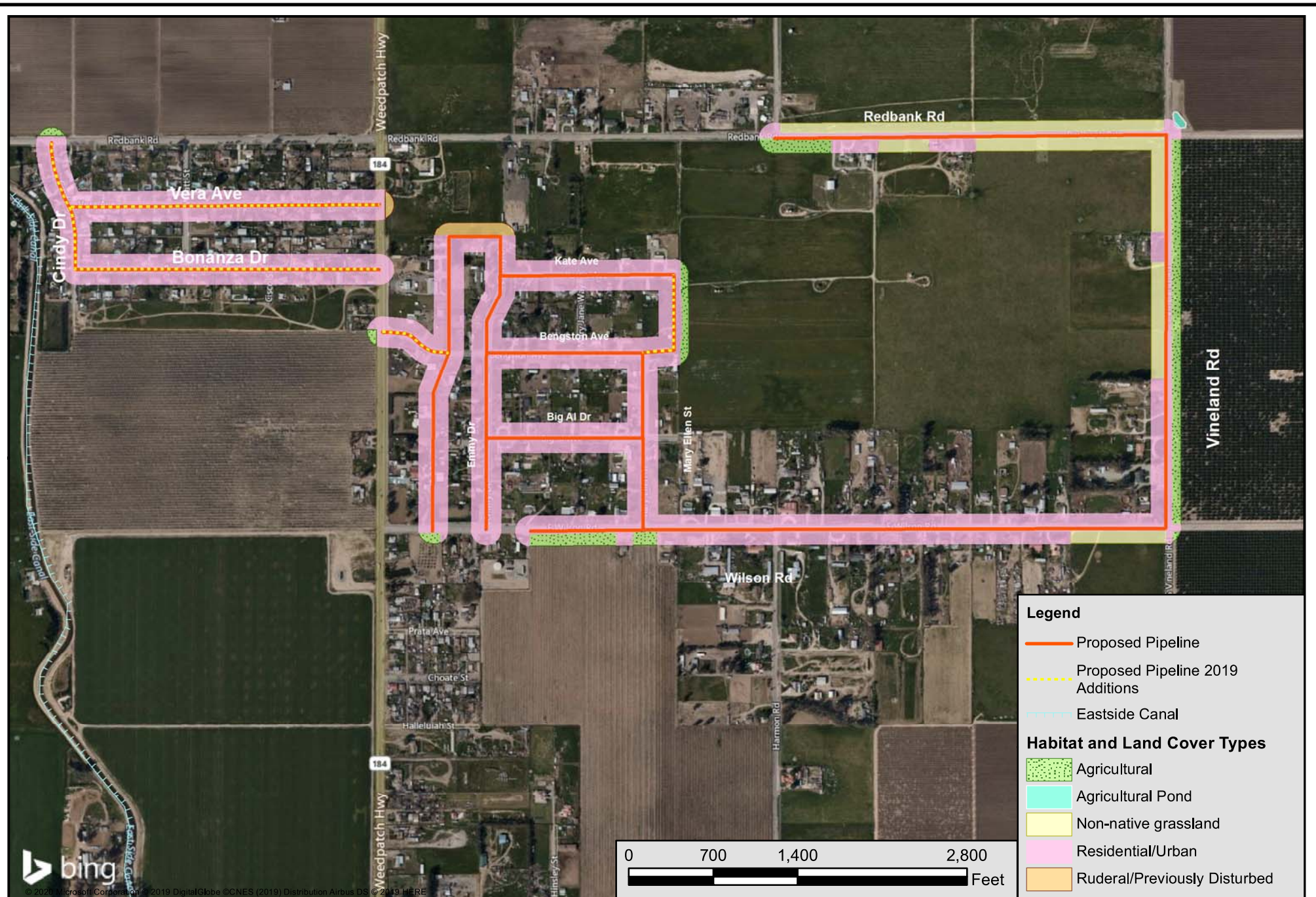


EAST NILES CSD  
NORTH WEEDPATCH HIGHWAY  
CONSOLIDATION PROJECT

Habitat and Land Cover Types  
South Study Area  
Figure 3c







**AECOM**



EAST NILES CSD  
NORTH WEEDPATCH HIGHWAY  
CONSOLIDATION PROJECT

**Habitat and Land Cover Types**  
**East Study Area**  
**Figure 3d**

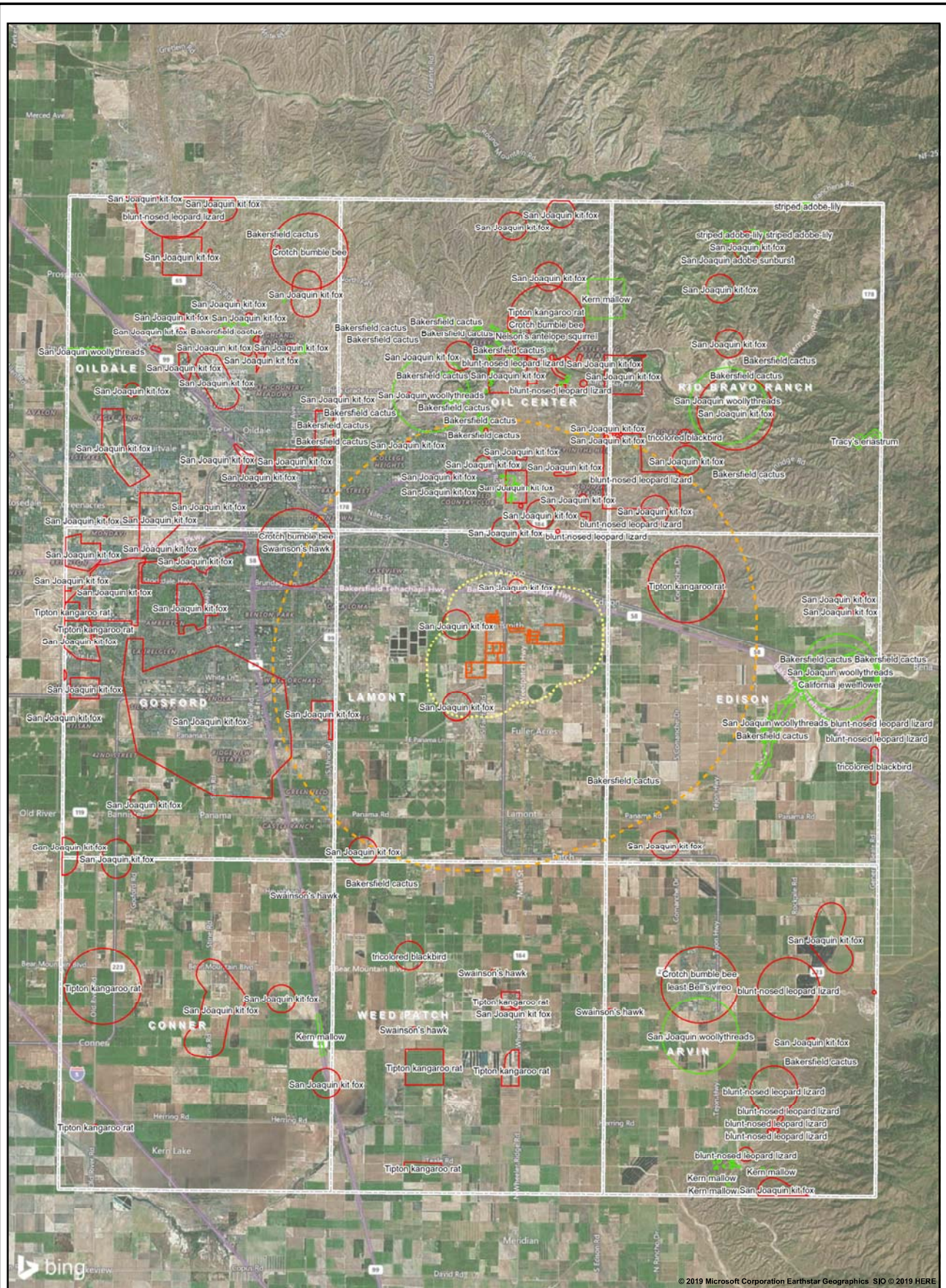


DATE: 1/24/2020

DWRN: W. Dawson

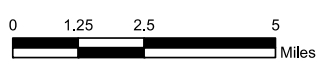
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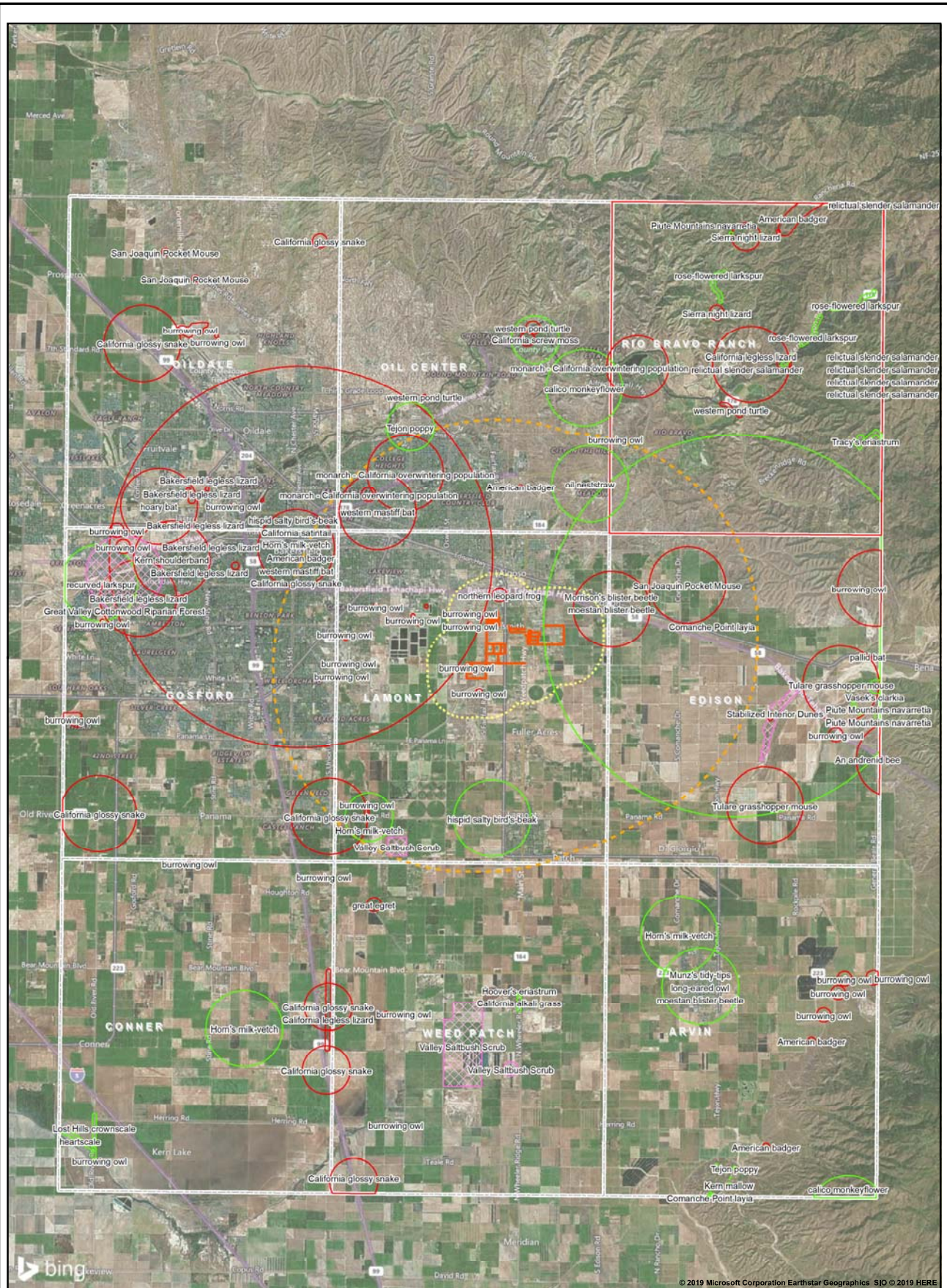


**Legend**

- Proposed Pipeline
- Project 5-Mile Buffer
- Project 1-Mile Buffer
- USGS 75-Minute Quadrangles







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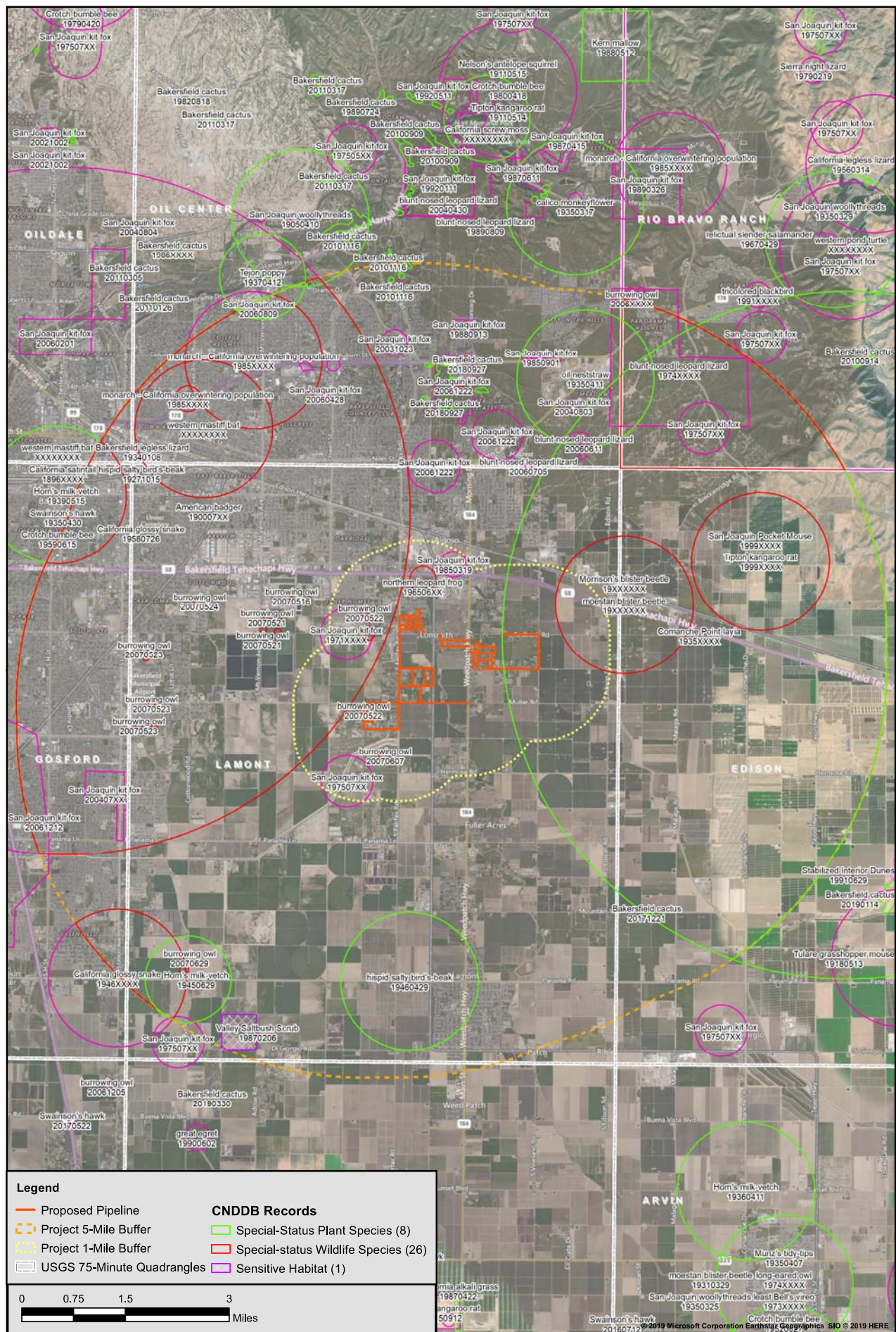


EAST NILES CSD  
NORTH WEEDPATCH HIGHWAY  
CONSOLIDATION PROJECT

California Natural Diversity Database  
Sensitive Species and Habitats - 9-Quad  
Figure 4b







**AECOM**



EAST NILES CSD  
NORTH WEEDPATCH HIGHWAY  
CONSOLIDATION PROJECT

California Natural Diversity Database  
Special-status Species within a 5-Mile Radius  
Figure 5





## **Appendix A: Plant and Wildlife Species Observed Within the Project Vicinity**

**TABLE A-1: Plant Species Observed within the Project Study Area**

Scientific Name <sup>1</sup>	Common Name	Native, Non-native <sup>2,3</sup>	Observed in 2016	Observed in 2019
<i>Atriplex sp.</i>	Saltbush	Native	X	
<i>Avena barbata</i>	Slender wild oat	Non-native	X	
<i>Brassica nigra</i>	Black mustard	Non-native Invasive	X	X
<i>Bromus diandrus</i>	Ripgut brome	Non-native Invasive	X	
<i>Bromus madritensis ssp. rubens</i>	Red brome	Non-native Invasive	X	
<i>Chenopodium sp.</i>	Goosefoot	Non-native		X
<i>Cynodon dactylon</i>	Bermuda grass	Non-native Invasive		X
<i>Datura stramonium</i>	Jimsonweed	Non-native	X	X
<i>Digitaria sanguinalis</i>	Hairy crabgrass	Non-native	X	
<i>Eschscholzia californica</i>	California poppy	Native	X	
<i>Festuca perennis</i>	Italian rye grass	Non-native	X	
<i>Foeniculum vulgare</i>	Sweet fennel	Non-native Invasive	X	
<i>Helianthus annuus</i>	Hairy leaved sunflower	Native		X
<i>Hordeum marinum</i>	Mediterranean barley	Non-native Invasive	X	
<i>Hordeum murinum</i>	Hare barley	Non-native Invasive	X	
<i>Salsola tragus</i>	Russian thistle	Non-native Invasive	X	X
<i>Solanum elaeagnifolium</i>	Silver leaved horsenettle	Non-native	X	X
<i>Suaeda nigra</i>	Bush seepweed	Native	X	
<i>Tribulus terrestris</i>	Puncture vine	Non-native	X	X

1 Ornamental and commercial species present only in associated with residential/urban or agricultural lands and outside the potential disturbance area are not listed.

2 Source: Cal-IPC 2019.

3 Species listed as limited, moderate, or high invasiveness by Cal-IPC for the Great Valley region.

**TABLE A-2: Wildlife Species Observed Within the Study Area in 2016 and 2019**

Scientific Name	Common Name	Observed in 2016	Observed in 2019
<b>Birds</b>			
<i>Aphelocoma californica</i>	Western scrub jay	X	X
<i>Buteo jamaicensis</i>	Red-tailed hawk	X	X
<i>Cathartes aura</i>	Turkey vulture		X
<i>Columba livia</i>	Rock dove		
<i>Corvus corax</i>	Common raven	X	X
<i>Haemorphus mexicanus</i>	House finch		X
<i>Hirundo rustica</i>	Barn swallow	X	
<i>Mimus polyglottos</i>	Northern mockingbird	X	
<i>Passer domesticus</i>	House sparrow	X	
<i>Streptopelia decaocto</i>	Eurasian collared dove	X	X
<i>Tyranus verticalis</i>	Western kingbird	X	
<i>Zenaida macroura</i>	Mourning dove		X
<b>Mammals</b>			
<i>Canis latrans</i>	Coyote		X
<i>Thomomys bottae</i>	Botta's pocket gopher		X
<i>Otospermophilus beecheyi</i>	California ground squirrel	X	X

## **Appendix B: Site Photographs (October 9, 2019)**



**Photograph 1:** View of the vacant parcel where the proposed groundwater well and facilities will be installed. Facing north from Shirley Lane.



**Photograph 2:** View of the proposed pipeline alignment through a representative residential area, facing west along Mayfair Court.



**Photograph 3:** View of non-native grasslands (left) and residential areas along Redbank Road. Facing west from the intersection with Vineyard Street.



**Photograph 4:** View of non-native grassland north of Redbank Road. Showing patchy coverage of non-native grasses and forbs. Facing east from near the intersection with Vineyard Street.





**Photograph 5:** View of cleared non-native grassland area located at the southwest corner of the intersection of Redbank Road and Vineland Avenue. Facing southwest.



**Photograph 6:** View of residential properties (left) and a citrus orchard (right) along Vineland Road. Facing north from the intersection with Wilson Road.



**Photograph 7:** View of non-native grassland along the south side of Wilson Road. Residential properties line the north side of the road (not shown). Facing southwest from the intersection with Vineland Road.



**Photograph 8:** View of agricultural area consisting of a small-tree commercial orchard, along the south side of Wilson Road. Facing south from the intersection of Wilson Road and Mary Ellen Street.





**Photograph 9:** View of existing roads, residential properties, and small attached livestock yards along Emmy Drive. View north from Wilson Road.



**Photograph 10:** View of paved roads along pipeline alignment through the residential neighborhood north of Wilson Ave. Facing west along Bengston Avenue from the intersection with Mary Ellen Street.



**Photograph 11:** View of residential areas and disturbance along pipeline alignment from the intersection of Bengston Avenue and Mary Ellen Street. Facing east.



**Photograph 12:** View of the pipeline alignment through a previously disturbed empty lot toward residential properties. Facing south from the end of Katie Avenue.



**Photograph 13:** View of pipeline alignment along Bengston Avenue. Facing east from the intersection with SR 184 (Weedpatch Highway).



**Photograph 14:** View of paved roads and residential properties along pipeline alignment. Facing east from the intersection of Wyatt Street and Vera Avenue.





**Photograph 15:** View of pipeline alignment along unpaved access road and existing railroad line.  
Facing south from Wilson Road.



**Photograph 16:** View of dirt roadway along Wilson Road, with agricultural field to the north (right).  
Facing west from the end of Wilson Road.



**Photograph 17:** View of row crop agricultural field located northeast of the intersection of Wilson Road and Fairfax Road. Facing north from the intersection of Wilson Road and Holder Street.



**Photograph 18:** View of unpaved roadway with adjacent residential lots and private livestock pastures. Facing west from the intersection of Cooter Street and Hallelujah Street.





**Photograph 19:** View of residential properties (left) and agricultural areas (right) along Fairfax Road. Facing north from intersection with Oasis Road.



**Photograph 20:** View of dirt roadway and residential properties along Oasis Road. Facing west from intersection with Fairfax Road.



**Photograph 21:** View of ruderal/previously disturbed empty lot at the corner of South Sterling Road and Schwartz Road. Facing northeast.



**Photograph 22:** View of fallow agricultural field at the northwest corner of South Sterling Road and Muller Road. Facing northwest.



**Photograph 23:** View of Muller Road from the intersection with Dorothy Street. Facing east.



**Photograph 24:** View upstream of the Eastside Canal. Facing north from Muller Road.





**Photograph 25:** View downstream of the Eastside Canal. Facing south from Muller Road.



**Photograph 26:** View of the agricultural retention pond at the edge of the Study Area located northeast of the intersection of Vineland Avenue and Redbank Road. Facing northeast.

## **Appendix C: Potentially Occurring Special-status Plant and Wildlife Species**

**TABLE C-1: Special-Status Plant Species Not Observed But With Potential to Occur Within the Study Area**

Common Name	Scientific Name	Regulatory Status*	Blooming Period	Habitat Requirements <sup>1</sup>	Site Suitability	Potential to Occur
Lost Hills crownscale	<i>Atriplex coronata</i> var. <i>vallicola</i>	CRPR 1B.2	Apr-Sept	Occurs on alkaline soils, dried ponds and vernal pools in chenopod scrub and valley and foothill grassland habitats. Elevation range is 50 to 635 meters (165-2,080 feet).	Suitable dried ponds and vernal pool features do not occur within the Study Area. There is only one record for this species within a 9-quad records search, and that occurrence is located more than 10 miles southwest of the Project (CDFW 2019a). Not observed during surveys.	No
Bakersfield cactus	<i>Opuntia basilaris</i> var. <i>treleasei</i>	FE, SE, CRPR 1B.1	Apr-May	Occurs on sandy or gravelly soils in chenopod scrub, cismontane woodland, and valley and foothill grassland habitats. Elevations range from 120 to 150 meters (390-492 feet).	Potentially suitable grassland habitat occurs within and immediately adjacent to the Study Area. Nearest occurrence is located approximately 2.82 miles north of the Study Area (CDFW 2019a). Not observed during surveys.	Low
Horn's milk vetch	<i>Astragalus hornii</i> var. <i>hornii</i>	CRPR 1B.1	May-Sept	Occurs on alkaline soils on salty flats and lake margins, in meadows, seeps, and playas. Elevation ranges from 60 to 300 meters (196-985 feet).	No suitable lake margin or salty flat habitats occur within the Study Area. Nearest record is approximately 3.8 miles southwest of the Project (CDFW 2019a). Not observed during surveys.	No
California jewel-flower	<i>Caulanthus californicus</i>	FE, SE, CRPR 1B.1	Feb-Apr	Occurs on sandy soils on flats and slopes, generally in non-alkaline grassland habitats. May also occur in chenopod scrub and pinyon/juniper woodland habitats. Elevation ranges from 60 to 1,005 meters (195-3,300 feet).	Potentially suitable grassland habitat present. As of 1986, this species has been considered likely extirpated from the San Joaquin Valley floor; three known extant populations are present in the Carrizo Plain, Cuyama Valley, and Santa Barbara Canyon (ESRP 2019). Nearest record was recorded in 1925 and is located approximately 7.8 miles east of the Study Area, and is considered Possibly Extirpated (CDFW 2019a). Not observed during surveys.	No

**TABLE C-1: Special-Status Plant Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Blooming Period	Habitat Requirements <sup>1</sup>	Site Suitability	Potential to Occur
Hispid salty bird's-beak	<i>Chloropyron molle</i> ssp. <i>hispidium</i>	CRPR 1B.1	Jun-Jul	Occurs in saline marshes and flats. Elevations range from sea level to 130 meters (0-426 feet).	Suitable saline habitats do not occur within the Study Area. Nearest occurrence was recorded in 1946 and is located approximately 2.65 miles south of the Study Area (CDFW 2019a). Not observed during surveys.	No
Vasek's clarkia	<i>Clarkia tembloriensis</i> ssp. <i>calienstensis</i>	CRPR 1B.1	Apr-May	Occurs in valley and foothill annual grasslands, generally in steep-sided canyons on grassy north- and west-facing slopes. Elevations range from 275 to 500 meters (900-1,640 feet).	Suitable canyon habitat is not present within the Study Area, and Study Area does not occur at suitable elevations. Species is known in only three occurrences near Caliente Creek, approximately 8.0 miles east of the Study Area, recorded in 1986 (CDFW 2019a). Not observed during surveys.	No
Rose-flowered larkspur	<i>Delphinium purpusii</i>	CRPR 1B.3	Mar-May	Occurs in rocky, often carbonate soils in talus and on cliffs. Found in chaparral, cismontane woodland, and pinyon and juniper woodland communities. Elevation ranges from 300 to 1,300 meters (985-4,265 feet).	Suitable rocky substrates are not present within the Study Area, and Study Area does not occur at suitable elevations. Nearest occurrence was recorded in 1933 is located approximately 8.8 miles northeast of the Study Area (CDFW 2019a). Not observed during surveys.	No
Recurved larkspur	<i>Delphinium recurvatum</i>	CRPR 1B.2	Mar-Jun	Occurs on poorly drained, fine, alkaline soils in grassland and <i>Atriplex</i> sp. scrub. Elevation ranges from 30 to 600 meters (98-1,970 feet).	Soils within the Study Area are well-drained types not suitable to support this species. Nearest occurrence was recorded in 1936, and is located approximately 8.8 miles west of the Study Area (CDFW 2019a). Not observed during surveys.	No

**TABLE C-1: Special-Status Plant Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Blooming Period	Habitat Requirements <sup>1</sup>	Site Suitability	Potential to Occur
Kern mallow	<i>Eremalche kernensis</i>	FE, CRPR 1B.2	Mar-May	Occurs on eroded hillsides and alkali flats, on dry, open, sandy to clay soils. Often occurs at the edges of balds. Found in chenopod scrub and valley and foothill grassland habitats. Elevation ranges from 100 to 1,000 meters (328-3,280 feet).	Suitable hillside and alkali flat habitat not present within the Study Area. Nearest occurrence was recorded in 1988 and is located approximately 8.0 miles north of the Study Area (CDFW 2016a). Not observed during surveys.	No
Hoover's eriastrum	<i>Eriastrum hooveri</i>	CRPR 4.2	Mar-Jul	Occurs on alkaline flats and above dry streambeds, sometimes on gravelly soils. Found in chenopod scrub, pinyon and juniper woodland, and valley and foothill grassland habitats. Elevation ranges from 50 to 915 meters (164-3,000 feet).	No suitable alkaline flat or dry streambed habitat present in the Study Area. Nearest occurrence was recorded in 1986 and is located approximately 8 miles south of the Study Area (CDFW 2019a). Not observed during surveys.	No
Tejon poppy	<i>Eschscholzia lemmonii</i> ssp. <i>Kernensis</i>	CRPR 1B.1	Mar-Apr	Found in open grassland and chenopod scrub habitats. Elevation ranges from 200 to 1,000 meters (656-3,280 feet).	Study Area does not occur at suitable elevations. Nearest occurrence was record in 1937 and is located approximately 4.68 miles northwest of the Study Area (CDFW 2019a). Not observed during surveys.	No
Striped adobe-lily	<i>Fritillaria striata</i>	ST, CRPR 1B.1	Feb-Apr	Occurs on adobe clay soils in cismontane woodland and valley and foothill grassland habitats. Elevation ranges from 135 to 1,455 meters (440-4,775 feet).	Suitable adobe soils do not occur within the Study Area. Nearest occurrence was recorded in 1983 and is located approximately 10.8 miles northeast of the Study Area (CDFW 2019a). Not observed during surveys.	No

**TABLE C-1: Special-Status Plant Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Blooming Period	Habitat Requirements <sup>1</sup>	Site Suitability	Potential to Occur
Shevock's golden-aster	<i>Heterotheca shevockii</i>	CRPR 1B.3	Aug-Sep	Occurs in crevices and shallow sand in chaparral and cismontane woodland habitats. Elevation ranges from 400 to 800 meters (1,312-2,625 feet).	Suitable chaparral and woodland habitats are not present, and Study Area does not occur at suitable elevations. Nearest occurrence was recorded in 1996 and is located approximately 11 miles northeast of the Study Area (CDFW 2019a). Not observed during surveys.	No
California satintail	<i>Imperata brevifolia</i>	CRPR 2B.1	Sep-May	Occurs in mesic areas including wet springs, meadows, streambeds and floodplains in chaparral, coastal scrub, Mojavean desert scrub, and riparian scrub habitats. Found at elevations below 500 meters.	Suitable mesic habitats are not present within the Study Area. Nearest occurrence was recorded in 1896 and is located approximately 4.5 miles northwest of the Study Area (CDFW 2019a). Not observed during surveys.	No
Comanche point layia	<i>Layia leucopappa</i>	CRPR 1B.1	Mar-Apr	Occurs in grassy areas and open, heavy soil in chenopod scrub and valley and foothill grassland habitats. Elevation ranges from 150 to 350 meters.	Suitable heavy soils are not present within the Study Area. Nearest occurrence was recorded in 1935 and overlaps the eastern portion of the Study Area (CDFW 2019a). Not observed during surveys.	No
Calico monkeyflower	<i>Diplacus</i> <i>[Mimulus] pictus</i>	CRPR 1B.2	Mar-May	Occurs in bare, sunny, shrubby areas and disturbed areas around granitic outcrops in broad-leaved upland forest, and cismontane woodlands. Elevation range is 135 to 1,250 meters (440-4,100 feet).	Suitable woodland habitats are not present within the Study Area. Nearest occurrence was recorded in 1935 and is located approximately 5.2 miles north of the Study Area (CDFW 2019a). Not observed during surveys.	No

**TABLE C-1: Special-Status Plant Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Blooming Period	Habitat Requirements <sup>1</sup>	Site Suitability	Potential to Occur
Piute Mountains navarretia	<i>Navarretia setiloba</i>	CRPR 1B.1	Apr-Jul	Occurs in depressions in clay and gravelly loam soils in cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland habitats. Elevation ranges from 500 to 1,200 meters (1,640-3,937 feet).	Suitable soils are not present within the Study Area, and the Study Area does not occur at suitable elevations. Nearest occurrence was recorded in 2011 and is located approximately 7.58 miles east of the Study Area (CDFW 2019a). Not observed during surveys.	No
San Joaquin adobe sunburst	<i>Pseudobahia peirsonii</i>	FT, SE, CRPR 1B.1	Mar-May	Occurs on bare, dark clay and adobe clays soils in cismontane woodland and valley and foothill grassland habitats. Elevation ranges from 100 to 900 meters (328 to 2,950 feet).	Suitable clay soils are not present within the Study Area. Nearest occurrence was recorded in 2010 and is located approximately 10.6 miles northeast of the Study Area (CDFW 2019a). Not observed during surveys.	No
Oil neststraw	<i>Stylocline citroleum</i>	CRPR 1B.1	Mar-Apr	Occurs on open, stable, often crusted sands and clay soils on dry drainage edges and between <i>Atriplex</i> sp. shrubs. Found in chenopod scrub, coastal scrub, and valley and foothill grassland habitats. Elevation ranges from 60 to 300 meters (200-985 feet).	Suitable crusted soils are not present within Study Area. Suitable drainages and mature saltbush shrubs do not occur. Nearest occurrence was recorded in 1935 and is located approximately 3 miles north of the Study Area (CDFW 2019a). Not observed during surveys.	No
California alkali grass	<i>Puccinellia simplex</i>	CRPR 1B.2	Mar-May	Occurs on alkaline, vernal mesic soils, saline flats, sinks, flats, lark margins and near mineral springs. Found in chenopod scrub and valley and foothill grassland habitats, meadows, seeps, and vernal pools. Elevation ranges from sea level to 900 meters (0-2,950 feet).	Suitable mesic and/or saline soils are not present within the Study Area. Suitable mesic habitats do not occur. Nearest occurrence was recorded in 1987 and is located approximately 8.5 miles south of the Study Area (CDFW 2019a). Not observed during surveys.	No

**TABLE C-1: Special-Status Plant Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Blooming Period	Habitat Requirements <sup>1</sup>	Site Suitability	Potential to Occur
Alkali mariposa-lily	<i>Calochortus striatus</i>	CRPR 1B.2	Apr-Jun	Occurs on alkaline, mesic soils in in alkaline meadows and moist creosote-bush scrub, chaparral scrub, and Mojavean desert scrub habitats, and in meadows and seeps. Elevation ranges from 800 to 1,400 meters (2,625-4,595 feet).	Suitable habitat are not present, and Study Area does not occur at suitable elevations. Nearest occurrence was recorded in 2014 and is located approximately 14 miles southeast of the Study Area (CDFW 2019a). Not observed during surveys.	No
San Joaquin woollythreads	<i>Monolopia congdonii</i>	FE, CRPR 1B.2	Feb-May	Occurs on sandy soils in chenopod scrub and valley and foothill grassland habitats. Elevations range from 90 to 700 meters (295-2,300 feet).	Potentially suitable non-native grassland habitat is present. Nearest occurrence was recorded in 1988 and is located approximately 5 miles north of the Study Area (CDFW 2019a). Not observed during surveys.	Low
Munz's tidy-tips	<i>Layia munzii</i>	CRPR 1B.2	Mar-Apr	Occurs on alkaline clay soils in chenopod scrub and valley and foothill grassland habitats. Elevation ranges from 50 to 800 meters (165-2,625 feet).	Suitable alkaline clay soils are not present within the Study Area. Nearest occurrence was recorded in 1935 and is located approximately 8.4 miles southeast of the Study Area (CDFW 2019a). Not observed during surveys.	No
California screw moss	<i>Tortula californica</i>	CRPR 1B.2	-	Occurs on sandy soils in chenopod scrub and valley and foothill grassland habitats. Elevation ranges from 10 to 1,460 meters (33-4,790 feet).	Potentially suitable sandy soils and grassland habitat are present; however, Study Area lacks moist habitats capable of supporting mosses. Nearest occurrence (undated) is located approximately 7 miles north of the Project (CDFW 2019a). Not observed during surveys.	No

\* Source: CDFW 2019b.

Status Definitions:

FE = Federally Endangered

FT = Federally Endangered



**TABLE C-1: Special-Status Plant Species Not Observed But With Potential to Occur Within the Study Area, *continued***

SE = State Endangered

ST = State Threatened

SR = State Rare

CNPS = California Native Plant Society

CRPR = California Rare Plant Rank

1A = Presumed extinct/extirpated in California

1B = Plants that are rare, threatened, or endangered in California and elsewhere

2 = Rare, threatened, and endangered in California but more common elsewhere

3 = Plants about which more information is needed

4 = A watch list of plants of limited distribution

.1 = Seriously endangered in California

.2 = Fairly endangered in California

.3 = Not very endangered in California

1 Source: CNPS 2019, Baldwin *et. al* 2019.

TABLE C-2: Special-Status Wildlife Species Not Observed But With Potential to Occur Within the Study Area

Common Name	Scientific Name	Regulatory Status*	Nesting/ Breeding Period	Habitat Requirements	Site Suitability	Potential to Occur
<b>Invertebrates</b>						
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	FT	Adults active Mar-Jun	Found only in association with its host plant, elderberry ( <i>Sambucus</i> spp.); adults feed on leaves and flowers, and larvae feed on stems of plant. Primarily inhabits riparian woodlands, but may also occur in oak woodlands or other upland habitats where host plant occurs (USFWS 2019c).	Host plant species does not occur within or in the vicinity of the Study Area. Nearest occurrence was recorded in 1991 and is located approximately 5.8 miles northwest of the Study Area (CDFW 2019a). Not observed during surveys.	No
Crotch bumble bee	<i>Bombus crotchii</i>	State Candidate	---	Inhabits open grassland and scrub habitats. Annual colonies nest underground. Food plants include milkweed ( <i>Asclepias</i> spp.), pincushion flowers ( <i>Chaenactis</i> spp.), lupines ( <i>Lupinus</i> spp.), clover ( <i>Medicago</i> spp.), phacelia ( <i>Phacelia</i> spp.), and sages ( <i>Salvia</i> spp.) (IUNC 2016).	Potentially suitable grassland habitat is present within the Study Area; however, no individuals of any suitable food plants were identified within or adjacent to the Study Area. Nearest occurrence was recorded in 1959 and is located approximately 4.5 miles northwest of the Study Area (CDFW 2019a). Not observed during surveys.	No
Monarch butterfly	<i>Danaus plexippus</i>	SA	---	Migratory. Overwinters in wind-protected tree groves, typically of eucalyptus ( <i>Eucalyptus</i> spp.), Monterey pine ( <i>Hesperocyparis</i> spp.), and cypress ( <i>Cupressus</i> spp.), typically along the coast of California. Migrates north and east into the Sierra Nevada and western Rocky Mountains to breed. Lays egg on milkweeds ( <i>Asclepias</i> spp.) (CDFW 2019d).	Suitable breeding habitat does not occur within the Study Area due to the absence of the species' host plant. Adult monarch presence is possible during migration. Nearest occurrence was recorded in 1990 and is located approximately 3 miles northwest of the Study Area (CDFW 2019a). Not observed during surveys.	Low (transitory only)

**TABLE C-2: Special-Status Wildlife Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Nesting/ Breeding Period	Habitat Requirements	Site Suitability	Potential to Occur
Kern shoulderband snail	<i>Helminthoglypta callistoderma</i>	SA	---	Terrestrial snail species. Specific information limited, but likely occurs in moist microhabitats under brush and vegetative duff, rock outcroppings, talus, and deep soil crevices within desert environments. Likely feeds on decayed vegetative matter (Center for Biological Diversity 2014).	Suitable shrubby or rocky areas are not present within the Study Area, and suitable sheltering areas including rocky outcrops and deep soil cracks were not observed during surveys. Nearest occurrence is was recorded in 1916 and is located approximately 7.5 miles west of the Study Area in the vicinity of the Kern River (CDFW 2019a). Not observed during surveys.	No
Moestan blister beetle	<i>Lytta moesta</i>	SA	Apr-July	Typically found feeding on flowers and seed pods of dried vernal pool vegetation, including <i>Lupinus</i> , <i>Trifolium</i> , and <i>Eriodum</i> species (CDFW 2019d). Reproductive host unknown, but blister beetle females generally lay large numbers of eggs in the ground, and larvae seek out the nests of certain Hymenoptera (bees) or Orthoptera (grasshopper) egg cases. Blister beetle larvae feed on the pollen collected to support the host larvae (in the case of bees), and on the eggs and larvae themselves (Borror and White, 1970).	Suitable vernal pool habitat does not occur within the Study Area. Suitable food plants were not identified within or adjacent to the Study Area during surveys. Nearest occurrence (undated) is considered Possibly Extirpated and is located approximately 0.4 miles east of the Study Area (CDFW 2019a). Not observed during surveys.	No
Morrison's blister beetle	<i>Lytta morrisoni</i>	SA	Apr-July	Typically found feeding on flowers, including <i>Gilia tricolor</i> , and <i>Linanthus liniflorus</i> . Parasitizes solitary bees; larvae feed on the pollen collected to support the host larvae, as well as on	Suitable native flower species to support feeding adults were not observed within or adjacent to the Study Area. Nearest occurrence (undated) is	No

TABLE C-2: Special-Status Wildlife Species Not Observed But With Potential to Occur Within the Study Area, *continued*

Common Name	Scientific Name	Regulatory Status*	Nesting/ Breeding Period	Habitat Requirements	Site Suitability	Potential to Occur
				the eggs and larvae themselves (CDFW 2019d).	considered Possibly Extirpated and is located approximately 0.4 miles east of the Study Area (CDFW 2019a). Not observed during surveys.	
<b>Reptiles and Amphibians</b>						
Northern leopard frog	<i>Lithobates pipiens</i>	CSC	Breeding occurs in Mar-Jul; tadpoles metamorphose after 3-6 months.	Highly aquatic species. Occurs in permanent or semi-permanent water in many habitat types at elevations from sea level to 2,130 meters (0-6,990 feet). Requires shoreline cover or abundant emergent and submerged vegetation for cover. Egg masses attached to emergent vegetation; tadpoles utilize shallow water near shorelines. Dispersing adults may move as far as 1 mile overland, usually during or after rains (CalHerps 2019, CDFW 2019d).	Suitable aquatic habitat is not present within the Study Area; although the canal provides a permanent aquatic habitat, it lacks necessary shoreline cover and vegetation at the Project site. Nearest occurrence was recorded in 1965 and is located approximately 0.5 miles north of the Study Area (CDFW 2019a). Not observed during surveys.	No
Relictual slender salamander	<i>Batrachoseps relictus</i>	CSC	Late fall to winter; young emerge in late winter and early spring	Highly sedentary. Occurs in small, mesic areas, including swales, drainages, streams, and moist, wooded canyons, in valley foothill riparian, blue oak woodland, and mixed conifer woodlands. Relies on natural crevices and burrows dug by other species for refuge; may also take refuge under rotting logs, rock, and surface litter (CDFW 2019d).	Suitable slope and moist, stream habitat is not present within the Study Area. Nearest occurrence was recorded in 1967 and is located more than 10 miles northeast of the Study Area (CDFW 2019c). Not observed during surveys.	No

**TABLE C-2: Special-Status Wildlife Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Nesting/ Breeding Period	Habitat Requirements	Site Suitability	Potential to Occur
Bakersfield legless lizard	<i>Anniella grinnelli</i>	CSC	Breeding from early spring to Jul, young born Sep-Nov	Secretive, fossorial lizard. Occurs in areas with warm, moist, loose sandy or organic soils and sparse vegetation in oak woodland, chaparral, riparian woodland, oak-pine woodland, coastal dune, valley-foothill and desert scrub habitats at elevations from sea level to 1,800 meters (0-5,900 feet). Typically found in areas with leaf litter under trees and bushes in sunny locations. Forages in sand and leaf litter for insect prey (CalHerps 2019, CDFW 2019d).	Suitable habitat with moist, loose soils and suitable tree or shrub cover are not present within the Study Area. Species is not compatible with active agricultural activities. Nearest occurrence was recorded in 1934 and is located approximately 4.29 miles northwest of the Study Area (CDFW 2019a). Not observed during surveys.	No
Blunt-nosed leopard lizard	<i>Gambelia sila</i>	FE, SE, FP	Breeding starts in May; eggs hatch from July-Aug	Semiarid grassland, alkali flats and washes from 30-730 meters (approximately 100-2,400 feet). Prefers flat areas with open space for running over densely vegetated areas. Primarily diurnal. Utilized small mammal burrows for cover and shelter (CalHerps 2019, CDFW 2019d).	Potentially suitable low quality habitat present in non-native grasslands within and adjacent to the Study Area. Fragmented habitat and surrounding land uses not compatible with habitat requirements. Nearest occurrence was recorded in 2006 and is located approximately 2.4 miles north of the Study Area (CDFW 2019a). Not observed during surveys.	Low

**TABLE C-2: Special-Status Wildlife Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Nesting/ Breeding Period	Habitat Requirements	Site Suitability	Potential to Occur
Western pond turtle	<i>Emys marmorata</i>	CSC	Mar-Aug	Inhabits permanent and nearly permanent waters at elevations from sea level to 1,430 meters (0-4,690 feet). Associated with ponds, streams, irrigation ditches, or permanent pools along intermittent streams in a variety of habitats. Require vegetation and open water for cover and basking sites, including partially submerged logs, rocks, and floating vegetation mats (CDFW 2019d).	Suitable aquatic habitat is not present within the Study Area; only aquatic habitat is the Eastside Canal, which does not contain emergent vegetation or suitable basking sites. Nearest occurrence was recorded in 2000 located approximately 5.85 miles north of the Study Area (CDFW 2019a). Not observed during surveys.	No
<b>Birds</b>						
Tricolor blackbird	<i>Agelaius tricolor</i>	ST, CSC	Apr-July	Breeds in colonies near fresh water, often in emergent vegetation, but also in thickets of willow, blackberry, wild rose, and tall herbs. Feeds in grasslands, agricultural lands, flooded fields, and pond edges. May travel more than six miles to forage (CDFW 2019d).	Suitable marsh or wetland breeding habitat is not present within the Study Area; foraging may occur in the non-native grasslands, but is unlikely due to habitat quality in these areas. Nearest occurrence was recorded in 1990 and is located approximately 5.67 miles northeast of the Study Area (CDFW 2019a). Not observed during surveys.	Foraging only

**TABLE C-2: Special-Status Wildlife Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Nesting/ Breeding Period	Habitat Requirements	Site Suitability	Potential to Occur
Great egret	<i>Ardea alba</i>	SA (nesting)	Mar-Jul	Common year-round resident. Forages in shallow waters in fresh and saline emergent wetlands, along the edges of estuaries, lakes, and slow-moving streams, on mudflats and salt ponds, and in irrigated croplands and pastures. Nests in groves of large trees, usually near water; nesting locations must be isolated from human activities. May forage as far as 20 miles from nest, but generally much closer (CDFW 2019d).	Suitable breeding habitat is not present within the Study Area due to absence of suitable wetlands and constant human presence. Foraging is unlikely as agricultural areas within the Study Area consist of non-irrigated grazing pastures or citrus orchards, which are unlikely to support suitable prey. Nearest occurrence was recorded in 1990 and is located approximately 6.25 miles southwest of the Study Area (CDFW 2019a). Not observed during surveys.	Very low, foraging only
Long-eared owl	<i>Asio otus</i>	CSC (nesting)	Early Mar-late Jul	Uncommon winter visitor to the Central Valley and Southern California deserts. Occurs in riparian habitats, live oak thickets, and other dense stands of trees. Nocturnal. Forages over open ground or in woodland habitats primarily for voles and other rodents and small birds, including other owls (CDFW 2019d, Peeters 2007).	Species does not nest within the Central Valley. Potentially suitable tree stands for wintering habitat are present adjacent to the Study Area. Nearest occurrence was recorded in 1974 and is located approximately 8.6 miles southeast of the Study Area (CDFW 2019a). Not observed during surveys.	Wintering only



**TABLE C-2: Special-Status Wildlife Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Nesting/ Breeding Period	Habitat Requirements	Site Suitability	Potential to Occur
Snowy egret	<i>Egretta thula</i>	SA (nesting)	Mar-May	Widespread year-round resident in the Central Valley. Forages for aquatic prey in shallow water or along shores or wetland and aquatic habitats; may also take reptiles and small mammals. May forage in irrigated agricultural fields. Nests in thick vegetation in isolated areas. May forage up to 12 miles from the nesting area, but usually less than 1.2 miles (CDFW 2019d, Cornell 2019).	Suitable isolated wetland breeding habitat does not occur within the Study Area. Foraging within the Study Area is unlikely due to absence of marsh habitats or irrigated agricultural fields. Canal provides poor quality foraging habitat due to slope of banks. Nearest occurrence was recorded in 1990 and is located approximately 6.25 miles southwest of the Study Area (CDFW 2019a). Not observed during surveys.	Very low, foraging only
Least bell's vireo	<i>Vireo bellii pusillus</i>	FE, SE (nesting)	Mar-Aug	Rare, local, summer resident. Occurs in willow stands and other low, dense, valley foothill riparian habitat at elevations from sea level to 600 meters (0-1,970 feet). Obligate riparian species during the breeding season (USFWS 2006, CDFW 2019d).	Suitable riparian habitat does not occur within or in the vicinity of the Study Area. Species believed to be extirpated within the San Joaquin Valley (USFWS 2006.) Nearest occurrence was recorded in 1978 and is located approximately 85 miles southeast of the Study Area (CDFW 2019a). Not observed during surveys.	No

**TABLE C-2: Special-Status Wildlife Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Nesting/ Breeding Period	Habitat Requirements	Site Suitability	Potential to Occur
Swainson's hawk	<i>Buteo swainsonii</i>	ST, BCC (nesting)	Late Mar-Aug	Uncommon summer resident. Inhabits and nests in open stands of trees in juniper-sage flats, riparian areas, and oak savanna, as well as scattered stands of trees in agricultural areas. Forages in adjacent grasslands or suitable grain or alfalfa fields, or livestock pastures. Feeds on a variety of vertebrates, particularly small mammals, during the breeding season, and a large number of insects when not breeding (CDFW 2019d, Cornell 2019).	Potentially suitable foraging habitat is present with the Study Area, and suitable prey species were observed during surveys. Potentially suitable nesting sites occur in the vicinity of the Study Area. No recent occurrences in the vicinity. Nearest occurrence was recorded in 1935 and is located approximately 4.3 miles northwest of the Study Area (CDFW 2019a). Not observed during surveys.	Moderate
Western burrowing owl	<i>Athene cunicularia</i>	CSC, BCC (burrow sites and some wintering sites)	Mar-Aug, peak from Apr-May	Open, dry grassland and desert habitats, as well as grass, forb, and open shrub areas of pinyon-juniper and ponderosa pine habitats up to 1,600 meters (approximately 5,250 feet) elevation. Inhabits small mammal burrows, especially those dug by ground squirrels, for roosting, cover, and breeding. Primarily insectivorous, also takes small mammals, reptiles, birds, and occasionally carrion. Active year-round, and may hunt during the day or at night (CDFW 2019d).	Potentially suitable habitat is present within the Study Area. Three records within a 1-mile buffer of the Project. One recorded occurrence in 2007 overlaps the western portion of the Study Area (CDFW 2019a). Not observed during surveys.	Moderate
<b>Mammals</b>						

**TABLE C-2: Special-Status Wildlife Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Nesting/ Breeding Period	Habitat Requirements	Site Suitability	Potential to Occur
Tipton kangaroo rat	<i>Dipodomys nitratoideus nitratoideus</i>	FE, SE	Breeds in winter, young born late Mar-Apr	Occupies areas with level or nearly level terrain in valley saltbush scrub, interior dune grassland, and iodine bush shrubland habitats. Resides in burrows dug in friable soils of varying particle size. Nocturnal. Feeds primarily on seeds and grains, may also take insects and some herbaceous material (USFWS 1998).	Potentially suitable habitat present in non-native grasslands within and adjacent to the Study Area; however, habitat is of poor quality for this species due to previous disturbance and occurrence is unlikely. Nearest occurrence was recorded in 1999 and is located approximately 2.5 miles northeast of the Study Area (CDFW 2019a). Not observed during surveys.	Low
Tulare grasshopper mouse	<i>Onychomys torridus tularensis</i>	CSC	Apr-Aug	Arid grasslands, alkali sink, and shrubland habitats, particularly dominated by saltbrush ( <i>Atriplex</i> ) and goldenbush ( <i>Ericameria</i> ) species. Primarily insectivorous, also takes seeds, and small reptiles and amphibians (ESRP 2016).	Potentially suitable habitat present in non-native grasslands within and adjacent to the Study Area; however, habitat is of poor quality for this species due to the absence of preferred shrub species. Nearest occurrence was recorded in 1918 and is located approximately 5.8 miles southeast of the Study Area (CDFW 2019a). Not observed during surveys.	Very low

**TABLE C-2: Special-Status Wildlife Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Nesting/ Breeding Period	Habitat Requirements	Site Suitability	Potential to Occur
Nelson's antelope squirrel	<i>Ammospermophilus nelsoni</i>	ST	Feb-May	Dry, flat, or rolling terrain with gentle slopes (generally 10-14%) in sparsely vegetated shrubland habitats, or in areas without shrubs where giant kangaroo rats also occur. Associated with alkali desert scrub and annual grassland habitats. Seldom dig own burrows, preferring to use burrows dug by other small mammal species, especially kangaroo rats. Preferred burrow locations are under shrubs, and along arroyo banks, roadcuts, pipelines, and drilling platforms (IUCN 2016, Eder 2007).	Potentially suitable habitat is present in the non-native grasslands within the Study Area, and Study Area does occur within known range for species; however, no occurrences are recently known. Numerous active and inactive small mammal burrows observed in road cuts through Study Area. Nearest occurrence was recorded in 1911 and is located approximately 6 miles north of the Study Area (CDFW 2019a). Not observed during surveys.	Very low
Western mastiff bat	<i>Eumops perotis californicus</i>	CSC	Apr-Aug	Uncommon resident of open, semi-arid to arid lowlands, including desert washes and flood plains, at elevations from 5 to 300 meters (16-985 feet). Roosts in crevices in cliffs and open rock faces, where there is a long vertical drop; occasionally roosts in high buildings, tunnels, and trees. Requires large surfaces of open water for drinking (Animal Diversity Web 2019, Eder 2005).	Suitable roosting sites within and adjacent to the Study Area are severely limited, consisting only of relatively isolated tall trees adjacent to residential areas. Drinking water is available. Nearest occurrence an undated record located approximately 2.7 miles northwest of the Study Area (CDFW 2019a). Not observed during surveys.	Very low



**TABLE C-2: Special-Status Wildlife Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Nesting/ Breeding Period	Habitat Requirements	Site Suitability	Potential to Occur
Hoary bat	<i>Lasiurus cinereus</i>	SA	Breeds in fall, young born mid-May-Jul	Widespread but common throughout its range, prefers woodland and forest habitats with dense cover above, open space below, and ground cover of low reflectivity. Edges of habitat are preferred. Roosts 3 to 5 meters above the ground, usually in the foliage of trees. Forages primarily on moths, although other flying insects may be taken (CDFW 2019d, Animal Diversity Web 2019).	Suitable woodland roosting and foraging habitat does not occur within the Study Area. Nearest occurrence was recorded in 1894 and is located approximately 8.6 miles northwest of the Study Area (CDFW 2019a). Not observed during surveys.	No
Pallid bat	<i>Antrozous pallidus</i>	CSC	Breeds Oct-Feb, young born Apr-Jul	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Day roosts are caves, crevices, mines, and sometimes hollow trees and buildings. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roost sites. Forages over open ground, usually 0.5 to 2.5 meters above ground level (CDFW 2019d, Zeiner <i>et al.</i> 1988–1990).	Suitable roosting sites are limited within and adjacent to the Study Area, consisting of agricultural and residential buildings in the vicinity. Nearest occurrence was recorded in 1998 and is located approximately 7.8 miles east of the Study Area (CDFW 2019a). Not observed during surveys.	Very low
American badger	<i>Taxidea taxus</i>	CSC	Breeds summer/early fall, young born in Mar-Apr	Found in open areas of herbaceous habitats, shrublands and forests with dry, friable soils used for burrows. Preys mostly on burrowing rodents (CDFW 2019d, Zeiner <i>et al.</i> 1988–1990).	Potentially suitable habitat exists in non-native grasslands within the Study Area; suitable prey species occur. Nearest occurrence was recorded in 1900 with a 5-mile accuracy, which abuts the northwest corner of the Study Area (CDFW 2019a). Not observed during surveys.	Moderate (foraging and transitory uses)

**TABLE C-2: Special-Status Wildlife Species Not Observed But With Potential to Occur Within the Study Area, *continued***

Common Name	Scientific Name	Regulatory Status*	Nesting/ Breeding Period	Habitat Requirements	Site Suitability	Potential to Occur
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	FE, ST	Feb-Sept	Annual grasslands and grassy stages of vegetation dominated by scattered brush, shrubs, and scrub. Require loosely-textured, sandy and loamy soils in open, levels areas for digging burrows used for cover and breeding. Active year-round, mostly nocturnal, and primarily carnivorous, taking jackrabbits, cottontails, and other rodents, as well as insects, reptiles, some birds, eggs, and some vegetation (CDFW 2019d).	Potentially suitable habitat is present within the Study Area, and the Study Area does occur within the known range for this species. Three records located within 1-mile of the Project area. Nearest occurrence was recorded in 1971 and is located approximately 0.4 mile west of the Study Area (CDFW 2019a). Not observed during surveys.	Moderate
San Joaquin pocket mouse	<i>Perognathus inornatus</i>	SA	May-July	Inhabits dry, open, grassy or weedy habitats, arid annual grasslands, and desert-shrub or chaparral habitats with sandy washes or finely textured soil. Burrows are often positioned at the base of shrubs, and are used for breeding, cover, shelter, and food storage. Primarily a seed-eater, may also take some insects (IUCN 2016).	Potentially suitable grassland habitat with suitable soils occurs within the Study Area, and Study Area does occur within known range for the species. Nearest occurrence was recorded in 1999 and is located approximately 2.8 miles east of the Study Area (CDFW 2019a). Not observed during surveys.	Low

\*Source: CDFW 2019c.

Status Definitions:

CSC = California Species of Concern

FE = Federally Endangered

FT = Federally Threatened

FP = State Fully Protected

SE = State Endangered

ST = State Threatened

SR = State Rare

SA = Special Animal

BCC = Bird of Conservation Concern

## **Environmental Topics added by the new CEQA Guidelines**

### **Description**

## Environmental Topics added by the new CEQA Guidelines Description

On December 28, 2018, the State Resources Agency adopted new CEQA Guidelines, which added three new environmental topics to the CEQA Initial Study checklist. As indicated below, the Modified Project would have no impact with regard to these three topics.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<b>ENERGY:</b> Would the Modified Project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction of operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy of energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a,b – Construction for the Modified Project will comply with all applicable energy efficiency code requirements. Operation of the well site and pipelines facilities will not have a significant impact on energy consumption; these facilities will be operated with electric power. The power demand anticipated for these new facilities is anticipated to be less than the power demand to operate the existing six water system wells for the private water system which will be abandoned.				
<u>Mitigation Measures</u> None required, as all potential impacts are less than significant.				

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
<b>TRIBAL CULTURAL RESOURCES:</b>				
a) Would the Modified Project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

In 2016, the NAHC completed a search of the Sacred Lands File for the USGS quadrangle. The results were negative. NAHC provided a contact list for local tribes. The Tule River Indian Tribe and Kitanemuk and Yowlumne Tejon Indians have not responded to multiple contact attempts. The Tejon Indian Tribe and Santa Rosa Rancheria Tachi Yokut Tribe both recommend that a Cultural Monitoring Plan be considered or at a minimum a Cultural Presentation be given to the construction contractors. Additional letters sent in 2020 resulted in no new recommendations.

#### Mitigation Measures

None required, as all potential impacts are less than significant.

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

According to the California Department of Forestry and Fire Protection, the site is not located in or near any (state or local) "FIRE HAZARD SEVERITY ZONES in State Responsibility Area" for Kern County ([https://osfm.fire.ca.gov/media/6687/fhszs\\_map15.pdf](https://osfm.fire.ca.gov/media/6687/fhszs_map15.pdf)). Therefore, this potential impact does not apply to the Modified Project site.

#### Mitigation Measures

None required, as all potential impacts are less than significant.



## **ATTACHMENT 2**

### **MITIGATION MONITORING AND REPORTING PROGRAM**

**EAST NILES COMMUNITY SERVICES DISTRICT**  
**North Weedpatch Highway Water system Consolidation Project**

**Addendum to the Adopted Mitigated Negative Declaration**  
**SCH No. 2016091046**  
**Mitigation Monitoring and Reporting Program**

**January 2020**

## 1. General

The Addendum to the Adopted Mitigated Negative Declaration (MND) for the East Niles Community Services District (District) North Weedpatch Highway Water System Consolidation Project specified a number of mitigation measures to be undertaken during implementation of the proposed project.

This Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the project and has been adopted concurrently with the findings of the final Addendum to the Initial Study and Adopted Mitigated Negative Declaration. This MMRP will enable tracking of the implementation of mitigation measures identified in the Addendum to the Adopted Mitigated Negative Declaration.

## 2. Responsibility for Compliance and Documentation

The District will be responsible for overall administration of the MMRP and for verifying that District staff members and/or the construction contractor has completed the necessary actions for each measure. The District will assign a project manager to oversee all aspects of implementation of the proposed project and ensure that the mitigation and monitoring commitments made in the MND are carried out in a timely and effective manner. In implementing the MMRP, the District will often rely on the expertise of outside consultants and contractors. To ensure the effectiveness of this mitigation and monitoring, the District will:

- Make the MMRP an element of all project-related requests for proposals and contract specifications, specifying that construction contractors will be responsible for appropriate acquisition of permits for construction and implementation of relevant mitigation and monitoring elements, as specified in this MMRP;
- Independently review contractor compliance on a regular basis and require corrective actions in a timely manner when the District determines that such actions are required;
- Maintain files, open to the public for inspection, documenting compliance with the MMRP;
- Designate a District staff member to receive and respond to all public and District comments, complaints, and/or questions regarding compliance with the MMRP; and
- Provide regulatory agencies with appropriate and timely documentation of compliance as specified in regulatory permits issued for the proposed project.

Additionally, the District will require that construction contractors designate a principal mitigation and monitoring manager (Principal) and back-up mitigation and monitoring manager (Alternate) and shall ensure that at least one of these is on-site during all phases of construction. These persons may perform other tasks, but shall have adequate time, training, and expertise to perform the required monitoring and documentation. The Principal shall be the contractor's construction field supervisor or assistant field supervisor. The Principal or Alternate shall independently verify compliance with required mitigation measures and shall indicate verification by filling out and signing the appropriate compliance checklist, thereby certifying compliance with all measures.

## 3. Incidents and Compliance Reporting

Timely reporting of compliance and of any incidents which may result in non-compliance is essential. Contracts for construction and for independent compliance contractors shall

therefore specify that, if the designated construction contractor for an activity determines that any aspect of construction is not in substantive compliance with the mitigation requirements for the activity, the contractor shall immediately take action to remedy the problem. The designated Principal or Alternate shall notify the District within not more than 24 hours following determination that any aspect of construction activity is not in compliance with mitigation requirements, shall explain how the incident has been addressed, and shall provide any other information requested by the District. Following action to address the out-of-compliance incident, the designated Principal or Alternate must complete an "incident report" and submit a copy of the report to the District's project manager within one week of the incident.

#### **4. Mitigation and Monitoring Program Update**

The District recognizes that laws, regulations, and policies related to construction activities may change during construction. The District's project manager is responsible for periodically review the status of laws, regulations, and guidelines applicable to their construction activity. The District will implement any new rules in effect at the time of approval.

#### **5. Staff Awareness**

Staff must be informed of mitigation and monitoring requirements prior to construction. New staff must be oriented when they come on site. The Principal/Alternate therefore needs to review compliance requirements and monitoring requirements for the job with all personnel on site to ensure that they know the requirements, know the importance of compliance, know that violations must be reported, and know that compliance is a condition of employment on this job. Similarly, a summary list of mitigation and monitoring requirements shall be posted in a conspicuous location at the job site so that they may be referred to at any time.

#### **6. Training**

If specialized expertise are necessary for mitigation or monitoring, District staff or the delegated construction contractor shall provide such training to the persons responsible for compliance and/or monitoring. For example, if biological pre construction surveys identify the presence of a special status species, the District shall retain the services of a qualified biologist familiar with this species to provide environmental training for the identification and protection of same.

#### **7. On Going Documentation**

Compliance will be monitored on a timely basis, depending on the nature of the activity and the Mitigation requirement. Where appropriate. photo documentation of pre-construction conditions, of activities during construction, of any incidents that may constitute a violation of mitigation requirements, and of post construction conditions are encouraged. However, if photo documentation is adopted as a monitoring tool, it must be used consistently to ensure that there are records of all activities for which compliance must be documented. Labels must be explanatory and contain adequate information about the photographer, date, time, and conditions when the photo was taken. Photo documentation shall be backed up with paper copies and/or records on CD/DVD. District staff may audit records of compliance with mitigation and monitoring requirements at any time and compliance records must be readily available and in good order. Logs of mitigation and monitoring compliance should be maintained and supporting documentation should be provided in parallel to the log. The District and its project manager and other contractors will maintain such records in a form suitable for the required monitoring and reporting. It is anticipated that contractors will generally have appropriate monitoring templates for typical construction activities. In other cases, the format of compliance

monitoring records may be available from the regulatory District approving the monitoring (if any).

## 8. Mitigation and Monitoring Requirements

The following includes a list of all of the mitigation measures identified in the MND.

### AESTHETICS

**AESTH-1** : Construction of either CMU block or chain link fence with privacy slats around the well site. Structures including the tank will be painted to match surrounding structures.

**AESTH-2** : Permanent lighting at the well site will be designed to minimize impacts to the adjoining neighbors..

### AIR QUALITY

**AIR-1** : The District will comply with all applicable air quality regulations as determined by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and will implement necessary air pollution prevention BMPs per the SJVAPCD guidelines.

### BIOLOGICAL RESOURCES

**BIO-1 : Pre-Construction Botanical Surveys.** Prior to ground disturbance, a qualified biologist should conduct clearance surveys in potentially suitable habitats that support native vegetation to document the presence of special-status botanical species. Surveys should be conducted within the appropriate blooming season for Bakersfield cactus and San Joaquin woollythreads.

**BIO-2 : Special-Status Plants Protection.** If special-status plant species are observed during botanical surveys, a no-disturbance buffer of no less than 5 feet from the edge of the root zone should be established to protect the individuals from direct impacts. If there is potential for Bakersfield cactus to occur, all cacti of the genus *Opuntia* should be identified and avoided to the extent feasible. If listed species are observed, then the appropriate agencies (CDFW, USFWS) should be consulted to determine an approved course of action.

**BIO-3 : Pre-Construction Surveys.** At least two weeks prior to the start of construction, a qualified biologist should conduct a comprehensive pre-construction survey for special-status wildlife species within the Project footprint and buffer. If a special-status species is observed, the appropriate agencies should be contacted for consultation and to determine an approved course of action.

**BIO-4 : Worker Environmental Awareness Training (WEAT).** Prior to construction, a Worker Environmental Awareness Training (WEAT) should be prepared and presented to all construction personnel at the start of Project-related activities. The training should discuss special-status species with the potential to occur within the Project footprint, including their regulatory status, description, and habitat requirements, and any sensitive habitat areas that may be encountered. The program should emphasize the importance of minimizing disturbance, and describe the federal, state, and local regulations protecting biological resources and the potential penalties for non-compliance with these laws and statutes.

**BIO-5 : Biological Monitor.** If special-status wildlife species are detected within the Project area or buffer during pre-construction surveys, a qualified biological monitor should be on-site during all ground-disturbing activities, including vegetation removal. The biological monitor should be the principal agent directing implementation of project mitigation measures, including



administering the WEAT, conducting compliance monitoring and pre-construction surveys, and completing necessary reporting.

**BIO-6 : Construction Materials.** All construction pipes, culverts and similar structures with a diameter of 4-inches or greater that are stored at the construction site for one or more overnight periods should be thoroughly inspected for wildlife prior to the pipes being moved, buried, capped, or otherwise used. If wildlife is observed, work in the area should stop and the pipe should not be moved; wildlife should be allowed to disperse from the area under its own volition if feasible.

- a. If a common wildlife species is observed within a pipe or similar structure, a qualified biologist may capture the animal and relocate it to suitable habitat out of the construction area.
- b. If a San Joaquin kit fox is observed within a pipe or similar structure, the USFWS should be notified before any action is taken. If necessary for the safety of the kit fox, under the supervision of a qualified biologist the pipe may be moved only once to remove it from the path of construction activities, until the kit fox has dispersed from the area of its own volition.

**BIO-7 : Wildlife Entrapment Hazards.** Prior to construction, if feasible, exclusionary fencing (silt or construction fencing) should be installed around work areas where sensitive wildlife species have the potential to occur to prevent individuals from entering the work area.

- a. All trenches or holes more than 18 inches in depth that are to be left open overnight should be either securely covered or have wildlife escape ramps installed during non-work hours to prevent entrapment of common and special-status wildlife species.

**BIO-8 : General Site Housekeeping.** The following best management practices should be employed to protect special-status and common native wildlife.

- a. All food-related items such as wrappers, cans, bottles, and food scraps should be disposed of in secure trash containers and removed at least once a week from the construction site.
- b. No pets should be permitted at the construction site.
- c. Use of rodenticides and herbicides should be restricted in Project areas to prevent primary or secondary poisoning of special-status and common wildlife species and the depletion of important prey species. If rodent control is necessary, a zinc phosphide should be employed to reduce the risk of secondary poisoning.

**BIO-9 : Blunt-Nosed Leopard Lizard Protection.** Prior to the start of construction, a qualified biologist should conduct a focused reconnaissance survey for blunt-nosed leopard lizard to identify the potential seasonal presence and location of this species within the Project vicinity. If the reconnaissance survey indicates there is potential for seasonal presence of this species within the Project vicinity, specific protective measures should be developed and implemented in consultation with the CDFW and USFWS to identify and avoid and protect blunt-nosed leopard lizards in the Project vicinity. Protocol surveys should follow the methods described in the Approved Survey Methodology for the Blunt-nosed Leopard Lizard, Revised (CDFW 2019e).

- a. If blunt-nosed leopard lizards are observed during pre-construction surveys within the Project footprint or buffer, the USFWS and CDFW should be consulted to determine an appropriate course of action.

- b. If a blunt-nosed leopard lizard is encountered during Project-related work activities, all work in the vicinity that could result in the direct injury, disturbance, or harassment of the individual should immediately cease and the appropriate agencies should be notified and consulted to determine an approved course of action.

**BIO-10 : Swainson's Hawk Protection.** No more than 30 days prior to construction, a qualified biologist should conduct surveys of potentially suitable nesting habitats within 1 mile of the Project Area when work is to be conducted within the breeding season (March 1 to October 1).

- a. If active nests are identified, a no-disturbance buffer of no less than 0.25 mile should be established around the nest. The nest should be monitored by a qualified biologist until such time as it has been determined that the nest has either successfully fledged or failed.

**BIO-11 : Western Burrowing Owl Protection.** Within one week prior to construction, a qualified biologist should conduct surveys of potentially suitable habitats within the work area and buffer for western burrowing owls, their burrows and sign, following the most recent survey protocol provided in the Staff Report on Burrowing Owl Mitigation (CDFW 2012).

- a. If occupied, non-breeding burrows are observed, a no-disturbance buffer of no less than 160 feet will be established around the burrow. If a burrow is located within 160 feet of the work area, the CDFW should be consulted with to determine an appropriate course of action.
- b. If occupied, breeding burrows are observed, a no-disturbance buffer of no less than 300 feet will be established around the burrow. A qualified biologist will monitor the burrow until it has been determined that the nest has either failed or the young have fledged. If a burrow is located within 300 feet of the work area, the CDFW should be consulted with to determine an appropriate course of action.

**BIO-12 : American Badger Protection.** No more than two weeks prior to construction, a qualified biologist should conduct a survey for active American badger dens in potentially suitable habitats within the Project footprint and buffer.

- a. If inactive dens are observed, the biologist should backfill the dens by hand to discourage their reuse.
- b. If active non-natal dens are observed, a no-disturbance buffer of not less than 150 feet should be established around the den. If a den is located within 150 feet of the work area, the CDFW should be consulted to determine an appropriate course of action.
- c. If active natal dens are observed within the work areas or in the vicinity, a no-disturbance buffer of no less than 300 feet should be established around the den. The qualified biologist should monitor the den to determine when the young have dispersed and the den has been vacated, at which point the den may be backfilled by hand to prevent re-use.

**BIO-13 : San Joaquin Kit Fox Protection.** No more than two weeks prior to the start of construction, a qualified biologist should conduct surveys of the work area and buffer for signs of San Joaquin kit fox. Any suitable denning locations should be investigated for use; observation of any active dens should result in consultation with the USFWS and CDFW. Surveys should be conducted following the most recent San Joaquin kit fox survey protocol provided in San Joaquin Kit Fox Survey Protocol for the Northern Range, established by the USFWS (1999).

San Joaquin kit fox protective measures should follow the recommendations set forth in the Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 2011). In accordance with those recommendations, the following measures should be implemented.

- a. If potential or known dens are identified during the pre-construction surveys, suitable no-disturbance buffers should be implemented around the dens. No-disturbance zones should be maintained throughout all construction activities and other Project-related activities that have potential to cause disturbance to the kit foxes. Only essential vehicle operation on existing roads and foot traffic should be permitted within the no-disturbance buffer. Upon completion of potentially disturbing activities, all fencing and field markers should be removed.
  - i. If a potential or atypical den is observed, a no-disturbance buffer of at least 50 feet in radius should be implemented. The no-disturbance buffer for potential or atypical dens should employ placement of 4 to 5 flagged stakes at a distance of no less than 50 feet from the den entrance.
  - ii. If a known den is observed, a no-disturbance buffer of at least 100 feet in radius should be implemented. No-disturbance buffers for known dens should be demarcated by fencing that encircles the den at the appropriate distance and does not hinder kit fox access to the den site. Suitable fencing materials may include the following: untreated wood particle board, silt fencing, orange construction fencing, or other fencing as approved by the USFWS. All fencing must include openings for kit fox ingress and egress.
  - iii. If an occupied or unoccupied natal/ pupping den is observed, the USFWS and CDFW will be notified to determine suitable protective measures.
- b. If active San Joaquin kit fox dens are observed within the work area or buffer during construction activities, all work should immediately stop and the USFWS and CDFW should be notified. Protective measures for the den should follow those described in BIO-13(a).
- c. Disturbance to San Joaquin kit fox dens should be avoided to the extent feasible. If avoidance of the den is not possible, the den may be excavated by hand and backfilled to prevent re-use. The USFWS and CDFW should be contacted prior to the excavation of any potential or known kit fox den; take authorization may be required.
  - i. Prior to excavation, the den should be monitored for a minimum of three (3) days using a tracking medium or infra-red beam camera to ensure the den is vacant. If the den is known to be vacant, the den should be fully excavated, backfilled with native soil and compacted to ensure kit foxes cannot re-enter the den during construction activities.
  - ii. Natal/pupping dens should not be disturbed or destroyed; such action requires take authorization from the USFWS and CDFW. Destruction may be authorized only after the pups and adults have naturally dispersed from the den and only after agency consultation.
- d. If a San Joaquin kit fox is encountered during Project activities, all work that could result in a direct injury, disturbance, or harassment should immediately cease and the designated biologist should be notified.

- e. If a San Joaquin kit fox is inadvertently entrapped, killed, or injured during Project-related activities, the CDFW and USFWS should be notified by phone immediately.
- f. In addition to the immediate notification described in (e), if a San Joaquin kit fox is inadvertently injured or killed during Project-related activities, the CDFW and USFWS should be notified in writing within three (3) working days of the incident. The notification should include the date, time, and location of the incident or finding, and any other pertinent information.

**BIO-14 : Tipton Kangaroo Rat Protection.** No more than two weeks prior to construction, a qualified biologist should conduct surveys within the Project footprint and buffer to identify potential kangaroo rat burrows. Where potential burrows are identified, a live-trap survey should be conducted following the methods provided in the USFWS-approved Survey Protocol for Determining Presence of San Joaquin Kangaroo Rats (2013). If any Tipton kangaroo rats are identified during surveys, consultation with the USFWS and CDFW should be conducted to determine an approved course of action.

- a. If any Tipton kangaroo rats are observed during work activities, all work in the vicinity should immediately stop and the appropriate agencies (CDFW, USFWS) should be contacted for consultation. If uninvestigated kangaroo rat burrows are observed during construction, work in the vicinity should stop and appropriate live-trap surveys should be conducted to confirm the species.

**BIO-15 : Nesting Birds Protection.** When construction activities will occur during the migratory bird breeding season (February 1 through August 31), a qualified biologist should conduct a nesting bird survey of the Project footprint and a minimum of a 300-foot adjacent buffer no more than 1 week prior to the start of construction or vegetation clearing activities.

- a. If any active nests are identified within the Project footprint or buffer, a no-disturbance buffer should be established, measuring no less than 300 feet for nesting raptors, and 150 feet for all other species. A qualified biologist should monitor the nest for progress, until such time as the nest has been determined to have failed or successfully fledged.
- b. All vegetation clearing activities required by the Project should be conducted outside the breeding bird season to the extent feasible. Where vegetation clearing must be conducted within the breeding bird season, these activities should be preceded by a nesting bird survey conducted by a qualified biologist no more than one (1) week prior to the start of vegetation clearing. Vegetation clearing activities within suitable nesting bird habitat also should be monitored by a qualified biologist.

## **CULTURAL RESOURCES**

**CULT-1 :** Prior to construction, a qualified archeologist will develop and implement a Worker Environmental Awareness Program.

**CULT-2 :** A qualified archeologist will conduct a reconnaissance level cultural resources survey of the areas within the project where ground disturbance will occur.

## **GEOLOGY AND SOILS**

**GEO-1 :** Construction contractor will be required to develop and implement a storm water pollution prevention plan (SWPPP) in accordance with the State of California Construction General Permit Guidelines.

**NOISE**

**NOISE-1** : Well Drilling contractor will be required to provide sound barriers during night time well drilling operations to minimize noise levels for the adjoining neighbors.

**TRAFFIC**

**TRA-1** : Construction contractor will be required to develop and implement a traffic control plan in accordance with local, State, and Federal requirements.