

PIXLEY IRRIGATION DISTRICT

ADDENDUM TO THE MITIGATED NEGATIVE DECLARATION FOR PIXLEY RECHARGE BASIN, “DEER CREEK BASIN EXPANSION PROJECT”

SCH NO. 2018061049

TULARE COUNTY

APRIL 2026

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Appendix A – 2018 IS/MND

ACRONYMS AND ABBREVIATIONS

CEQA-----	California Environmental Quality Act
Cal/OSHA-----	California Occupational Safety and Health Administration
District-----	Pixley Irrigation District
EIR-----	Environmental Impact Report
GHG-----	Greenhouse Gas
HSR-----	High Speed Rail
IS-----	Initial Study
MND-----	Mitigated Negative Declaration
Project-----	Deer Creek Basin Expansion Project
SJVAPCD-----	San Joaquin Valley Air Pollution Control District
SWPPP-----	Stormwater Pollution Prevention Plan

1 INTRODUCTION

The Pixley Irrigation District (District) has prepared this Addendum to an adopted Initial Study/Mitigated Negative Declaration (IS/MND) for the Pixley Recharge Basin (SCH No. 2018061049). The 2018 Pixley Recharge Basin IS/MND was adopted by the District on July 17, 2018.

Since District adoption of the 2018 IS/MND, High Speed Rail (HSR) has determined that their HSR project will need to utilize additional dirt and could utilize additional export from the recharge basin expansion for their project. The 2018 IS/MND included a 160-acre recharge basin ([Appendix A](#)). The District had the opportunity to purchase an additional 38 acres adjacent to the existing basin to create a larger recharge basin that would allow the District to capture and recharge flood and storm water.

The District has reviewed the expansion Project and on the basis of the whole record, has determined that there is substantial evidence to support the determination that the 2018 IS/MND remains relevant in considering the environmental impacts of the Project changes and that no substantial evidence to support a fair argument that the changes to the Project, as identified in the attached addendum, would have a significant impact on the environment beyond that which was evaluated in the adopted IS/MND. A subsequent Environmental Impact Report (EIR) or MND is not required pursuant to the California Environmental Quality Act of 1970 (CEQA) (Section 21000, et. Seq., Public Resources Code of the State of California).

This addendum to the original 2018 IS/MND has been prepared pursuant to Sections 15162 and 15164 of the CEQA Guidelines.

A copy of the document and all supportive documentation may be reviewed or obtained at the Pixley Irrigation District office, 357 E Olive Avenue, Tipton, CA 93272, Monday through Friday 8:00 am to 5:00 pm.

2 PROJECT DESCRIPTION

2.1 PROJECT BACKGROUND

2.1.1 PROJECT TITLE

Addendum to the Pixley Recharge Basin, “Deer Creek Basin Expansion” Project

2.1.2 LEAD AGENCY NAME AND ADDRESS

Pixley Irrigation District
357 E Olive Street
Tipton, CA 93272

2.1.3 CONTACT PERSON AND PHONE NUMBER

Lead Agency

Pixley Irrigation District
John Michael Domondon, Operations Manager/District Engineer
(559) 752-5050

CEQA Consultant

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(559) 449-2700

2.1.4 PROJECT LOCATION

The proposed Project is located in unincorporated Tulare County, California, approximately 220 miles south of Sacramento and 40 miles north of Bakersfield. The Project site is located on Assessor’s Parcel Number(s) 316-210-014, 316-210-002, 316-210-001. The centroid of the Project site is 35°55'20.17"N 119°17'05.70"W.

2.1.5 GENERAL PLAN DESIGNATION AND ZONING

Project Area	General Plan Designation	Zoning District
ONSITE	General Agriculture	General Agriculture - 40 District (AG-40)
ADJACENT LANDS	General Agriculture	General Agriculture - 40 District (AG-40)

2.1.6 DESCRIPTION OF PROJECT PROJECT BACKGROUND AND PURPOSE

An IS/MND was prepared in 2018, and a Notice of Determination (NOD) was filed July 17, 2018, for the Pixley Recharge Basin Project (Project). However, HSR has determined that their HSR project would need to utilize additional dirt, and the District was presented with the opportunity to purchase the adjacent 38-acre parcel next to the existing recharge basin to expand the current recharge basin from 160 to 198 acres. This would allow the District to capture and recharge flood and stormwater that would otherwise leave the region. Water would be diverted from an existing canal into the proposed groundwater recharge basin during wet years. The recharge benefits would help maintain prime agriculture in this area of high overdraft. The increase in groundwater availability would support the overall viability of existing agricultural activities.

Since the Project would expand the Pixley Recharge Basin from 160 to 198 acres, a CEQA Addendum to the IS/MND is required as this scope of work is outside the original 2018 Project limits. CEQA Guidelines Section 15164 allows for the Lead Agency to adopt an Addendum to an existing approved CEQA document when non-substantial changes to the existing approved CEQA document are necessary.

PROJECT DESCRIPTION

As mentioned above in [Section 2.1.6.2](#), the Project would include a 38-acre expansion of the Pixley Recharge Basin from 160 to 198 acres (see [Figure 1](#), Project Site). The Project would utilize excess surface water from the Friant Division of the Central Valley Project for groundwater recharge. Any surface water to be diverted to the recharge basin during operations would include imported surface water, either through purchase, contract, or transfer. The Pixley Irrigation District Recharge Basin is currently named the Deer Creek Basin, and this Project is identified as the Deer Creek Basin Expansion Project.

The proposed groundwater recharge basin expansion would be composed of cells totaling 38 acres which would be adjacent to the existing 160-acre basin. Water would be diverted from the existing canal which runs adjacent to the property and parallel to Highway 99. Vehicular access to the Project would be available on Avenue 72 where a network of unpaved private roads on the property provides full access to the recharge basin. During construction, workers would utilize existing facility parking areas and/or temporary construction staging areas for parking vehicles and equipment. During operation of the Project, maintenance vehicles would be required to come approximately three times a week for required maintenance. However, the Project would not require any permanent, on-site employees during operation. No additional utilities or electrical service would be required as a part of the Project.

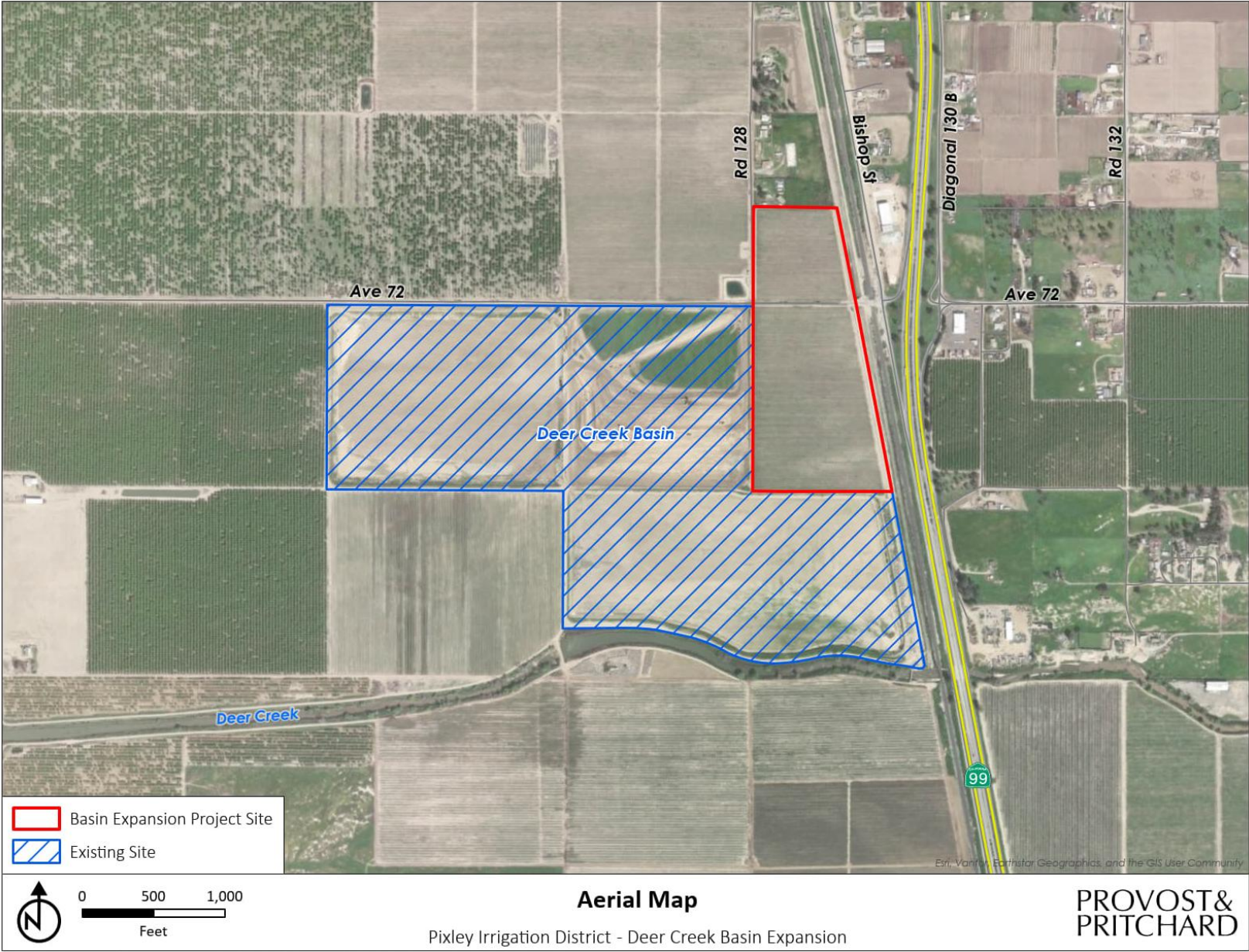


Figure 1. Project Site Map

3 CEQA ANALYSIS

3.1 DISCUSSION

The discussion in this addendum confirms that the proposed Project changes have been evaluated for significant impacts pursuant to CEQA. The discussion is meaningfully different than a determination that a project is “exempt” from CEQA review, as the proposed Project is not exempt. Rather, the determination here is that the potential impacts of the proposed Project were in a previously adopted IS/MND (i.e., the Pixley Groundwater Recharge Basin Project IS/MND) and that the IS/MND provides a sufficient and adequate analysis of the environmental impacts of the proposed Project. While the expansion Project is located on existing agricultural land next to an existing recharge basin, considering the proposed Project would expand the recharge basin from 160 acres to 198 acres, Pixley Irrigation District determined that an addendum is the appropriate environmental document.

3.1.1 AESTHETICS IMPACTS

Aesthetics					
Except as provided in Public Resources Code Section 21099, would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Have a substantial adverse effect on a scenic vista?		☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒	☐
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒	☐

The proposed Project would excavate an additional 38-acre basin to supply HSR with export dirt which is expected to expand the Pixley Recharge Basin from 160 acres to 198 acres. The expansion Project site is adjacent to the area previously excavated for the original 160-acre recharge basin and would include land that is essentially identical to the existing recharge basin. Similar to the existing recharge basin, the expansion would be recessed below the surrounding elevations and largely hidden. Therefore, the proposed Project would not degrade the existing visual character or quality of public views of the site or its surroundings. Impacts would remain consistent with the adopted IS/MND, which were determined to be no impact.

3.1.2 AGRICULTURAL AND FORESTRY RESOURCES IMPACTS

Agricultural and Forestry Resources					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved 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?	☐	☐	☐	☒	☐
a) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒	☐
b) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒	☐
c) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒	☐
d) 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?	☐	☐	☐	☒	☐

Portions of the proposed Project area are designated as Prime Farmland and Farmland of Local Importance. The proposed expansion Project would not change or alter existing zoning designations, nor would they result in the loss of forest land, or agricultural lands. Additionally, there would be no significant changes to the existing environment as a result of expanding the recharge basin. The proposed Project site is under Williamson Act Contract; however, according to Government Code 51238 the displacement of agricultural operations may be compatible with Williamson Act provisions if the activity relates directly to the production of commercial agricultural products. As noted in the 2018 IS/MND, while the site would no longer be used for prime agriculture production, the recharge benefits would help maintain prime agriculture in this area of high overdraft. The increase in groundwater availability would support the overall viability of existing agricultural activities. As such, impacts to agricultural resources would be the same as the adopted IS/MND, which found that no impacts would occur.

3.1.3 AIR QUALITY IMPACTS

Air Quality					
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☐	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	☐	☐	☐	☒	☐

Emissions of ozone precursor pollutants during the construction period would not exceed significance thresholds for the San Joaquin Valley Air Pollution Control District (SJVAPCD) and would therefore not contribute to air quality violations in conflict with attainment plans. Exposure to construction emissions would be short-term and temporary. Operational pollutant exposures would remain minimal, consisting only of maintenance vehicles driving to and from the Project for required maintenance. Additionally, as stated in the 2018 IS/MND, the Project would continue to comply with federal, State, and SJVAPCD rules and regulations. The 2018 IS/MND identified that air quality impacts to the region would be less than significant. The proposed Project would not substantially change the air quality impacts, therefore impacts would be consistent with the 2018 IS/MND. As such, impacts would continue to be less than significant.

3.1.4 BIOLOGICAL RESOURCES IMPACTS

Biological Resources					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒	☐

As identified in the MND, mitigation measures would be included in the proposed Project to bring impacts to a less than significant level. The land and habitat where the expanded basin would be located is adjacent to and very similar to the land and habitat of the original project. As the last MND database search was conducted in 2018, a new species list was obtained with updated information. A United States Fish and Wildlife Service Information for Planning and Consultation and a California Department of Fish and Wildlife California Natural Diversity Database search was conducted on April 3, 2026. The status of the burrowing owl (*Athene cunicularia*) has changed to a California Candidate Endangered Species and mitigation measures **BIO-3b** and **BIO-3c** have been revised to meet current mitigation thresholds. All other mitigation measures identified in the 2018 IS/MND would still apply and the additional acreage of the recharge basin would not require additional mitigation. Therefore, impacts on biological resources would be less than significant.

Mitigation Measures **San Joaquin Kit Fox**

The following measures adapted from the U.S. Fish and Wildlife Service 2011 Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (Appendix E) will be implemented.

BIO-1a: Preconstruction surveys for the San Joaquin kit fox shall be conducted on and within 200 feet of the project site, no less than 14 days and no more than 30 days prior to the start of ground disturbance activities on the site. The primary objective is to identify kit fox habitat features (e.g., potential dens and refugia) on and adjacent to the site and evaluate their use by kit foxes. Preconstruction surveys will be repeated following any lapses in construction of 30 days or more.

BIO-1b: Should active kit fox dens be detected during preconstruction surveys, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified. A disturbance-free buffer will be established around the burrows in consultation with the USFWS and CDFW, to be maintained until an agency-approved biologist has determined that the burrows have been abandoned.

BIO-1c: Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes in accordance with the USFWS Standardized Recommendations. The applicant shall implement all minimization measures presented in the Construction and On-going Operational Requirements section of the Standardized Recommendations, including, but not limited to: restriction of project related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g. pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash. See Appendix E of Appendix B for more details.

BIO-1d: Prior to the start of construction, the applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat needs; a report of the occurrence of kit fox in the project vicinity; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation. The training will include a handout with all of the training information included in it. The applicant will use this handout to train any construction personnel that were not in attendance at the first meeting, prior to those personnel starting work on the site.

BIO-1e: The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during

project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.

Bakersfield Legless Lizard

The applicant will implement the following measures for the protection of the Bakersfield legless lizard.

BIO-2a: Project-related vehicular and equipment travel along the Deer Creek access road shall observe a speed limit of 10 mph. During travel along this road, vehicle and equipment operators shall continually scan for lizards and snakes. If lizards or snakes are observed on the road, the operator will stop the vehicle/equipment and wait for the animals to move off the road before resuming travel.

BIO-2b: A description of this species and measures to avoid mortality will be included and presented in the employee education program described above in Mitigation Measure BIO-1d.

Burrowing Owl

The applicant will implement the following measures adapted from the Staff Report on Burrowing Owl Mitigation (CDFG 2012).

BIO-3a: A take avoidance survey for burrowing owls will be conducted by a qualified biologist between 14 and 30 days prior to the start of construction. This take avoidance survey will be conducted according to methods described in the Staff Report on Burrowing Owl Mitigation (CDFW 2012). The survey area will include all potential roosting and nesting habitat on and within 200 meters of project impact areas, where accessible.

BIO-3b: If an active BUOW burrow is detected, avoidance buffers will be implemented. A qualified biologist will determine appropriate avoidance buffer distances based on CDFW's 2012 *Staff Report on Burrowing Owl Mitigation*, the biology of BUOW, conditions of the burrow(s), and the level of project disturbance until the biologist has determined that the nestlings have fledged and all BUOW have left the project area, unless otherwise arranged with CDFW. ~~If project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are identified within or near project impact areas, a 200-meter disturbance free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.~~

Level of Disturbance				
Location	Time of Year	Low	Med	High
Nesting sites	April 1-Aug 15	200 meters	500 meters	500 meters
Nesting sites	Aug 16-Oct 15	200 meters	200 meters	500 meters
Nesting sites	Oct 16-Mar 31	50 meters	100 meters	500 meters

BIO-3c: If an active BUOW burrow is detected within the proposed work area and cannot be avoided, it is recommended the project obtain an Incidental Take Permit (ITP) in order to implement protection plans and/or relocation plans in consultation with CDFW and/or USFWS and protect the project from "take" of this species. ~~During the non-breeding season (September 1-January 31), resident owls occupying burrows in project impact areas may either be avoided, or passively relocated to alternative habitat. If the applicant chooses to avoid active owl burrows within the impact area during the non-breeding season, a 50-meter disturbance free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing, and will~~

~~remain in place until a qualified biologist determines that the burrows are no longer active. If the applicant chooses to passively relocate owls during the non-breeding season, this activity will be conducted in accordance with a relocation plan prepared by a qualified biologist.~~

American Badger

The following measures will be implemented to avoid and minimize the potential for project-related mortality of American badgers.

BIO-4a: A preconstruction survey for American badgers will be conducted by a qualified biologist within 30 days of the start of construction. Preconstruction surveys will be conducted in all potential denning habitat on the project site.

BIO-4b: Should an active natal den be identified during the preconstruction surveys, a suitable disturbance-free buffer will be established around the den and maintained until a qualified biologist has determined that the cubs have dispersed or the den has been abandoned.

Swainson's Hawk, White-tailed Kite, and Loggerhead Shrike

The project will not result in loss of habitat for the Swainson's hawk, white-tailed kite, or loggerhead shrike because no habitat for these species is present on the site. The riparian trees adjacent to the site within which these birds could nest will not be impacted by the project. The following measures will be implemented for the protection of nesting raptors and migratory birds including the Swainson's hawk, white-tailed kite, and loggerhead shrike.

BIO-5a: In order to avoid impacts to nesting raptors and migratory birds, the project will be constructed, if feasible, outside the nesting season, or between September 1st and January 31st.

BIO-5b: If project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 14 days prior to the start of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet, where accessible, for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to 6 mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.

BIO-5c: Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.

Roosting Bats, including Pallid Bat and Western Mastiff Bat

The project will not result in significant loss of roosting habitat for the pallid bat or western mastiff bat because similar residential structures are regionally abundant. The project will not result in loss of foraging habitat for these species because the site is expected to remain suitable for foraging following project implementation. The applicant will implement the following measures to avoid and minimize the potential for project-related mortality of roosting bats, as necessary.

BIO-6a: To avoid potential impacts to maternity bat roosts, building demolition should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.

BIO-6b: If removal of buildings is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to their removal, a qualified biologist will survey them for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.

BIO-6c: If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted under the direction of a qualified biologist.

BIO-6d: If a maternity colony is detected during preconstruction surveys, the biologist will identify a suitable disturbance-free buffer around the colony. The buffer will remain in place until the biologist determines that the nursery is no longer active.

3.1.5 CULTURAL RESOURCES IMPACTS

Cultural Resources					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
g) Cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?	☐	☐	☐	☒	
h) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☐	☐	☒	
i) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	☒	

A records search was conducted at the Southern San Joaquin Valley Archaeological Information Center, California State University, Bakersfield on May 14, 2018. Based on the records search, the 2018 MND found there to be no potential for the proposed Project to result in adverse impacts to significant or unique historical resources or historic properties. However, in the unlikely event that cultural resources are encountered, mitigation measures were provided. The proposed Project would not require additional mitigation measures and impacts to cultural resources would remain less than significant with incorporation of regulatory laws and requirements identified in the original Project.

MITIGATION MEASURES

CUL-1: If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (NPS 1983) should be contacted immediately to evaluate the find. If the discovery proves to be significant under CEQA, additional work such as data recovery excavation and Native American consultation may be warranted to mitigate any adverse effects.

CUL-2: The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

3.1.6 ENERGY IMPACTS

Energy					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐	☐

Impacts related to energy were not assessed as a part of the 2018 IS/MND. However, increases in the use of energy as a result of the proposed Project would be negligible. During construction, fuel consumed by construction equipment would be the primary use of energy. However, impacts would be short-term and temporary. Operational energy would remain minimal, consisting only of maintenance vehicles driving to and from the Project for required maintenance. The proposed Project would not conflict with current State energy efficiency or electricity supply requirements, or any local plans or programs for renewable energy or energy efficiency requirements. Therefore, impacts would be less than significant.

3.1.7 GEOLOGY AND SOILS IMPACTS

Geology and Soils					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
j) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☒	☐
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒	☐
iv. Landslides?	☐	☐	☐	☒	☐
k) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒	☐
l) 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?	☐	☐	☐	☒	☐
m) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) creating substantial direct or indirect risks to life or property?	☐	☐	☐	☒	☐
n) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒	☐
o) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☐	☒	☐	☐

According to the 2018 IS/MND there are no active faults surrounding the Project site. The Project is located in an area with low risk of liquefaction or landslides. The proposed Project would be designed and constructed in accordance with accepted engineering standards and methods. The Project area is generally level, and no habitable structures would be built as part of the proposed Project. The Project area has previously been disturbed and the probability of discovering a paleontological resource or unique geological feature is unlikely. As a result, the proposed Project would not result in or expose people to potential additional impacts involving seismic shaking. Therefore, impacts would be less than significant.

3.1.8 GREENHOUSE GAS EMISSIONS IMPACTS

Greenhouse Gas Emissions					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒	☐

The 2018 IS/MND determined that the estimated short-term and long-term greenhouse gases (GHGs) emissions would result in a less than significant impact, and the expansion of 38 acres of the recharge basin would not alter the 2018 IS/MND's determination. Emissions would be predominantly short-term, construction-related impacts, while operational emissions would be negligible. Implementation of the proposed Project is not anticipated to conflict with any applicable plan, policy, or regulation for reducing the emissions of GHGs. Impacts would remain less than significant as a result of the proposed Project.

3.1.9 HAZARDS AND HAZARDOUS MATERIALS IMPACTS

Hazards and Hazardous Materials					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒	☐
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☐	☒	☐

Construction of the proposed Project could involve the use of hazardous materials associated with construction equipment, such as diesel fuel, lubricants, and solvents. However, the contractor is required to implement a Storm Water Pollution Prevention Plan (SWPPP) and would comply with all California Occupational Safety and Health Administration (Cal/OSHA) regulations regarding regular maintenance and inspection of equipment, spill prevention, and spill remediation in order to reduce the potential for incidental release of pollutants or hazardous substances onsite. Furthermore, any potential accidental hazardous materials spills during construction are the responsibility of the contractor to remediate in accordance with industry best management practices and State and county regulations. The operational phase of the proposed Project would not involve the use or transport of hazardous materials. Additionally, the proposed Project does not involve land that is listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic Control Substances. The proposed Project does not involve the construction of any habitable structures; therefore, the proposed Project would not result in a safety hazard for people residing or working in the Project area. Impacts would remain less than significant as a result of the proposed Project.

3.1.10 HYDROLOGY AND WATER QUALITY IMPACTS

Hydrology and Water Quality					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:					
i. result in substantial erosion or siltation on- or off-site;	☐	☐	☐	☒	☐
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	☐	☒	☐
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	☐	☐	☒	☐
iv. impede or redirect flood flows?	☐	☐	☐	☒	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒	☐

The 2018 IS/MND did not identify any potentially significant hydrology and water quality impacts. The proposed Project would allow more landowners to utilize surface water from the District and would help to reduce groundwater pumping and consequently assist in stabilizing the groundwater table. As a result the net change in groundwater recharge potential surrounding the Project area would be positive. The proposed Project would not adversely affect surface or ground water quality. Drainage patterns would be altered; however, this would not result in substantial surface runoff as the water would be diverted into the recharge basin during potential flooding events. According to the Federal Emergency Management Agency National Flood Insurance Program Flood Insurance Rate Map, the Project is not located within the 100-year Flood Zone. In line with the 2018 IS/MND, there would be no impacts related to hydrology and water quality would be less than significant.

3.1.11 LAND USE AND PLANNING IMPACTS

Land Use and Planning					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
f) Physically divide an established community?	☐	☐	☐	☒	☐
g) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒	☐

The proposed Project would include the expansion of an existing recharge basin that would allow the District to capture and recharge flood and storm water. While the Project area is currently zoned for agriculture, the recharge benefits would help maintain prime agriculture in this area of high overdraft. The increase in groundwater availability would support the overall viability of existing agricultural activities. Additionally, according to the 2018 IS/MND, the Tulare County General Plan states that agricultural support activities are permitted on lands designated for agricultural use. The proposed Project would not divide an established community, nor would it conflict with any applicable habitat conservation plan or natural community conservation plan. Thus, impacts to land use and planning are consistent with the 2018 IS/MND, and no impacts would occur.

3.1.12 MINERAL RESOURCES IMPACTS

Mineral Resources					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
h) 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?	☐	☐	☐	☒	☐
i) 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?	☐	☐	☐	☒	☐

The Project area is not located in a Mineral Resource Zone. The proposed Project would not result in the loss of a known available mineral resource. Furthermore, the Project area has not been designated as a locally important mineral resource recovery site by a general plan, specific plan, or land use plan. Therefore, impacts to mineral resources are consistent with the 2018 IS/MND, and no impacts would occur.

3.1.13 NOISE IMPACTS

Would the project result in:	Noise				
	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒	☐
b) Generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒	☐

Construction of the proposed Project would involve temporary noise sources, originating predominately from off-road construction equipment, such as excavators, backhoes, graders, skid steers, loaders, and hauling trucks. The recharge basin and expansion area located on and adjacent to agricultural lands, accustomed to similar noises associated with farm equipment. There are no residences or other sensitive receptors directly adjacent to the Project site so excessive noise and ground-borne vibration levels would be negligible from the nearest sensitive receptor. The proposed Project would comply with the Tulare County Municipal Code where applicable. Impacts to noise are consistent with the 2018 IS/MND. Impacts would remain less than significant.

3.1.14 POPULATION AND HOUSING

Population and Housing					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒	☐
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐

The proposed Project involves the expansion of an existing recharge basin. The proposed Project would be consistent with the 2018 IS/MND, which found that the proposed Project would not induce population growth. No new housing or businesses would be a part of the proposed Project, and no housing or people would be displaced as a result of the Project. Thus, there would be no impact.

3.1.15 PUBLIC SERVICES

Public Services					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
Fire protection?	☐	☐	☐	☒	☐
Police protection?	☐	☐	☐	☒	☐
Schools?	☐	☐	☐	☒	☐
Parks?	☐	☐	☐	☒	☐
Other public facilities?	☐	☐	☐	☒	☐

The proposed Project would continue to not significantly impact public services in the jurisdiction related to fire protection, police protection, parks, or other public facilities. The proposed Project does not involve new housing or businesses, nor does it involve new infrastructure that could induce population growth. Therefore, the proposed Project would not induce population growth. The proposed Project would also not displace housing or people. The proposed Project would have no impact just as determined in the 2018 IS/MND.

3.1.16 RECREATION

Recreation					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒	☐

The proposed Project would have no effect on neighborhood and regional parks or other recreational facilities. The proposed Project itself does not involve recreational facilities, and it would not require the construction, expansion, or deterioration of existing recreational facilities. Project impacts to recreation would remain the same as described in the 2018 IS/MND, and there would be no impact.

3.1.17 TRANSPORTATION

Transportation/Traffic					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☒	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☒	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☐	☒	☐

The Project includes the expansion of an existing recharge basin and operation of the Project would only generate approximately three trips per week for general maintenance activities. The proposed Project is not located on a transportation corridor and would not result in a significant increase in vehicle miles traveled; and therefore, would have no impact related to CEQA Guidelines section 15064.3 Subdivision (b). The proposed Project would still not result in inadequate emergency access. Project impacts to transportation would remain the same as described in the 2018 IS/MND. Therefore, impacts would remain less than significant.

3.1.18 TRIBAL CULTURAL RESOURCES

Tribal Cultural Resources					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					
i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☐	☒	☐
ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒	☐

The proposed Project is located in an area that has been previously disturbed. The 2018 IS/MND records search and Native American outreach efforts indicated that there are no previously recorded cultural resources located in the Project area. As a result, less than significant impacts were expected. In the event that human remains, or tribal cultural resources are discovered, best practice mitigation measures were incorporated into the IS/MND. These mitigation measures are still applicable to the proposed Project. Impacts are consistent with the adopted IS/MND; there would be no additional impacts.

MITIGATION MEASURES

TCR-1: Tribal representatives will be invited to survey the site for signs of surface or subsurface cultural resources prior to the start of construction activities.

TCR-2: Project construction workers will be required to participate in a Cultural Sensitivity Training program. This program is intended to increase awareness of cultural resources that may be found on the

site and inform construction workers of their responsibility to identify and protect cultural resources found within the project area.

TCR-3: If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (NPS 1983) shall be contacted immediately to evaluate the find. If the discovery proves to be significant under CEQA, additional work such as data recovery excavation and Native American consultation may be warranted to mitigate any adverse effects.

TCR-4: The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

TCR-5: Prior to any ground disturbance, a surface inspection of the Project site shall be conducted by a qualified archeologist. The qualified archeologist shall monitor the site during ground disturbing activities. The archeologist shall provide pre-construction briefings to supervisory personnel, any excavation contractor, and any person who will perform unsupervised, ground disturbing work on the project in connection with construction. These meetings will include information on potential cultural material findings and how to act on the procedures if resources are found.

TCR-6: Prior to any ground disturbance, the applicant shall offer interested Tribes the opportunity to provide a Native American Monitor during ground disturbing activities during construction. Tribal participation would be dependent upon the availability and interest of the Tribe.

TCR-7: In the event that cultural resources, paleontological resources or unique geologic features are discovered during construction, operations shall stop within 100 feet of the find, and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall determine the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with §15064.5 of the CEQA Guidelines. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options. Any previously undiscovered resources found during construction within the Project area shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance. No further ground disturbance shall occur in the immediate vicinity of the discovery until approved by the qualified archaeologist. Prior to any ground disturbance, the applicant shall enter into an agreement with the Yokut Tribe ("Tribe") regarding cultural resources and burial treatment and protection ("Plan"), which shall be in a form acceptable to the Tribe County. Upon discovery of cultural resources, in addition to other procedures described in this mitigation measure, the Tulare County Resource Management Agency, along with other relevant agency or Tribal officials, shall be contacted to begin coordination on the disposition of the find(s), and treatment of any significant cultural resource shall be undertaken pursuant to the Plan. In the event of any conflict between this mitigation measure and the Plan, the stipulations of the Plan shall control.

TCR-8: Upon coordination with the Tulare County Resource Management Agency, any archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution

where they would be afforded long-term preservation. Documentation for the work shall be provided in accordance with applicable cultural resource laws and guidelines.

3.1.19 UTILITIES AND SERVICE SYSTEMS

Utilities and Service Systems					
Would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reductions goals?	☐	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	☒	☐

The proposed Project would not result in significant impacts on utilities and service systems. The proposed Project would divert excess surface waters from an existing canal for groundwater recharge. Any surface water would be diverted to the recharge basin during operations would include imported surface water, either through purchase, contract, or transfer. No additional utilities or service systems would be required as a part of the Project, and no wastewater would be generated. Impacts would remain less than significant as determined in the 2018 IS/MND.

3.1.20 WILDFIRE

Wildfire					
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐	☐
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrollable spread of wildfire?	☐	☐	☒	☐	☐
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐	☐
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?	☐	☐	☒	☐	☐

Impacts related to wildfire were not assessed as a part of the 2018 IS/MND. According to the California Department of Forestry and Fire Protection, the Project is in an Unzoned Local Responsibility Area and is not located in a State or Local Fire Hazard Severity Zone.¹ There would be no habitable structures built, and the Project area is relatively level. The proposed Project would not have any occupants and would therefore not expose people to pollutant concentrations from wildfire or uncontrolled spread of wildfire. No new infrastructure would need to be constructed to reduce fire risks as a result of the proposed Project, and no people or structures would be exposed to flooding or landslides as a result of the proposed Project. Therefore, impacts related to wildfire would be less than significant.

¹ (California Department of Forestry and Fire Protection, 2024)
PROVOST&PRITCHARD

3.1.21 MANDATORY FINDINGS OF SIGNIFICANCE

Mandatory Findings of Significance					
Would the Project:	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project	Less Impact than Approved Project
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒	☐
b) 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, and the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒	☐
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒	☐

Similar to what was noted in the 2018 IS/MND, the proposed Project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Mitigation measures included in the 2018 IS/MND would continue to be implemented to lessen the overall significance of potential impacts. With implementation of mitigation measures **BIO-1a** through **BIO-7c**, **CUL-1** and **CUL-2**, and **TCR-1** through **TCR-8** impacts related to biological and cultural resources would be less than significant. Additionally, all planned projects in the vicinity of the proposed Project would be subject to review in separate environmental documents. Similar mitigation measures would be expected of other projects in the surrounding area, most of which share similar cultural, paleontological, and biological resources. Consequently, environmental impacts related to the Project would not be cumulatively considerable. Therefore, impacts would be less than significant.

3.1.22 CONCLUSION

The following identifies the standards set forth in Section 15162 as they relate to the proposed Project. The text in italics that follows the provisions of the law relate to the proposed Project.

1. *No substantial changes are proposed in the project which would require major revisions of the previous IS/MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.*

The proposed Project would change expand the existing recharge basin from 160 acres to 198 acres. The increased acreage would result in an increased construction footprint, but no additional changes would be needed with the proposed Project. All mitigation measures adopted with the IS/MND would apply to this project and reduce any impacts to less than significant.

2. *No substantial changes have occurred with respect to circumstances under which the project is undertaken that would require major revisions of the previous MND due to the involvement of new significant environmental effect or a substantial increase in the severity of previously identified significant effects.*

The expanded recharge basin would increase the amount of immediately available water in the area. The expanded basin would be the only change in terms of impacts, and expansion would be located immediately adjacent to the existing recharge basin. The site would be visually consistent with existing conditions and would not substantially obstruct views. The impact would not be significant or substantial in nature.

3. *No new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous IS/MND was certified as complete or adopted, shows any of the following:*
 - *The project will have one or more significant effects not discussed in the previous IS/MND;*

As the proposed Project's required construction equipment and construction time will stay approximately the same as discussed in the approved IS/MND, and would not result in additional hazards, the previous IS/MND remains adequate.

- *Significant effects previously examined will be substantially more severe than shown in the previous IS/MND;*

As concluded in this addendum, expansion of the recharge basin would not substantially increase risk or result in more severe impacts than evaluated in the previous IS/MND. All other operational characteristics of the proposed Project remain unchanged from those evaluated in the previous IS/MND.

- *Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative, or;*

All the original mitigation measures would apply to the proposed Project. No new mitigation measures are necessary.

- *Mitigation measures or alternatives which are considerably different from those analyzed in the previous MND would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.*

The existing mitigation measures in the MND reduce all impacts to less than significant. No additional mitigation measures are warranted.

As indicated in this Addendum, the impacts of the proposed Project do not represent a substantial change to the original adopted MND, nor does it have any substantial changes with respect to the circumstances under which the proposed Project is undertaken, that would require major revisions to the original adopted MND. Analysis of the proposed Project shows that there are no new significant environmental effects or a substantial increase in the severity of previously identified significant effects as a result of the proposed Project.

Impacts beyond those identified and analyzed in the adopted MND would not be expected to occur as a result of the proposed Project, and the proposed Project would remain subject to all applicable previously required mitigation measures from the adopted MND. The proposed Project would not result in any new information of substantial importance that would have new, more severe impacts, new mitigation measures, or new or revised alternatives from what was identified in the original adopted MND.

Based on the record as a whole, there is no substantial evidence that the proposed Project would result in significant environmental impacts not previously studied in the MND and, accordingly, the proposed Project changes would not result in any conditions identified in CEQA Guidelines Section 15162. Thus, a supplemental or subsequent EIR or MND is not required for the proposed Project.

APPENDIX

Appendix A – 2018 IS/MND

Initial Study and Mitigated Negative Declaration for Pixley Recharge Basin

June 2018



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Section 1

Initial Study/Negative Declaration Process

Pixley Irrigation District

357 E Olive Street
Tipton, CA 93272

SECTION 1

CEQA Review Process

Project Title: Pixley Recharge Basin

1.1 California Environmental Quality Act Guidelines

Section 15063 of the California Environmental Quality Act (CEQA) Guidelines requires that the Lead Agency prepare an Initial Study to determine whether a discretionary project will have a significant effect on the environment. All phases of the project planning, implementation, and operation must be considered in the Initial Study. The purposes of an Initial Study, as listed under Section 15063(c) of the CEQA Guidelines, include:

(1) Provide the lead agency with information to use as the basis for deciding whether to prepare an EIR or negative declaration;

(2) Enable an applicant or lead agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a negative declaration;

(3) Assist the preparation of an EIR, if one is required, by:

(A) Focusing the EIR on the effects determined to be significant,

(B) Identifying the effects determined not to be significant,

(C) Explaining the reasons for determining that potentially significant effects would not be significant, and

(D) Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.

(4) Facilitate environmental assessment early in the design of a project;

(5) Provide documentation of the factual basis for the finding in a negative declaration that a project will not have a significant effect on the environment

(6) Eliminate unnecessary EIRs;

(7) Determine whether a previously prepared EIR could be used with the project.

1.2 Initial Study

The Initial Study provided herein covers the potential environmental effects of the construction of an inlet, outlet, 0.2 mile canal, and groundwater recharge basin affecting approximately 160 acres in Tulare County, CA. Pixley Irrigation District will act as the Lead Agency for processing the Initial Study/Negative Declaration pursuant to the CEQA Guidelines.

1.3 Environmental Checklist

The Lead Agency may use the CEQA Environmental Checklist Form [CEQA Guidelines, Section 15063(d)(3) and (f)] in preparation of an Initial Study to provide information for determination if there are significant effects of the project on the environment. A copy of the completed Environmental Checklist is set forth in **Section Three**.

1.4 Notice of Intent to Adopt a Negative Declaration

The Lead Agency shall provide a Notice of Intent to Adopt a Negative Declaration (CEQA Guidelines, Section 15072) to the public, responsible agencies, trustee agencies and the County Clerk within which the project is located, sufficiently prior to adoption by the Lead Agency of the Negative Declaration to allow the public and agencies the review period. The public review period (CEQA Guidelines, Section 15105) shall not be less than 45 days when the Initial Study/Negative Declaration is submitted to the State Clearinghouse unless a shorter period, not less than 30 days, is approved by the State Clearinghouse.

Prior to approving the project, the Lead Agency shall consider the proposed Negative Declaration together with any comments received during the public review process, and shall adopt the proposed Negative Declaration only if it finds on the basis of the whole record before it, that there is no substantial evidence that the project will have a significant effect on the environment and that the Negative Declaration reflects the Lead Agency's independent judgment and analysis.

The written and oral comments received during the public review period will be considered by Pixley Irrigation District prior to adopting the Negative Declaration. Regardless of the type of CEQA document that must be prepared, the overall purpose of the CEQA process is to:

- 1) Assure that the environment and public health and safety are protected in the face of discretionary projects initiated by public agencies or private concerns;
- 2) Provide for full disclosure of the project's environmental effects to the public, the agency decision-makers who will approve or deny the project, and the responsible trustee agencies charged with managing resources (e.g. wildlife, air quality) that may be affected by the project; and
- 3) Provide a forum for public participation in the decision-making process pertaining to potential environmental effects.

According to Section 15070(a) a public agency shall prepare or have prepared a proposed negative declaration for a project subject to CEQA when:

The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment. Less than significant impacts with mitigation measures have been identified.

The Environmental Checklist Discussion contained in Section Three of this document has determined that the environmental impacts of the project are less than significant with mitigation measures and that a Mitigated Negative Declaration is adequate for adoption by the Lead Agency.

1.5 Negative Declaration or Mitigated Negative Declaration

The Lead Agency shall prepare or have prepared a proposed Negative Declaration or Mitigated Negative Declaration (CEQA Guidelines Section 15070) for a project subject to CEQA when the Initial Study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment.

The proposed Negative Declaration or Mitigated Negative Declaration circulated for public review shall include the following:

- (a) A brief description of the project, including a commonly used name for the project.
- (b) The location of the project, preferably shown on a map.
- (c) A proposed finding that the project will not have a significant effect on the environment.
- (d) An attached copy of the Initial Study documenting reasons to support the finding.
- (e) Mitigation measures, if any.

1.6 Intended Uses of Initial Study/Negative Declaration documents

The Initial Study/Negative Declaration document is an informational document that is intended to inform decision-makers, other responsible or interested agencies, and the general public of potential environmental effects of the proposed project. The environmental review process has been established to enable the public agencies to evaluate environmental consequences and to examine and implement methods of eliminating or reducing any adverse impacts. While CEQA requires that consideration be given to avoiding environmental damage, the Lead Agency must balance any potential environmental effects against other public objectives, including economic and social goals.

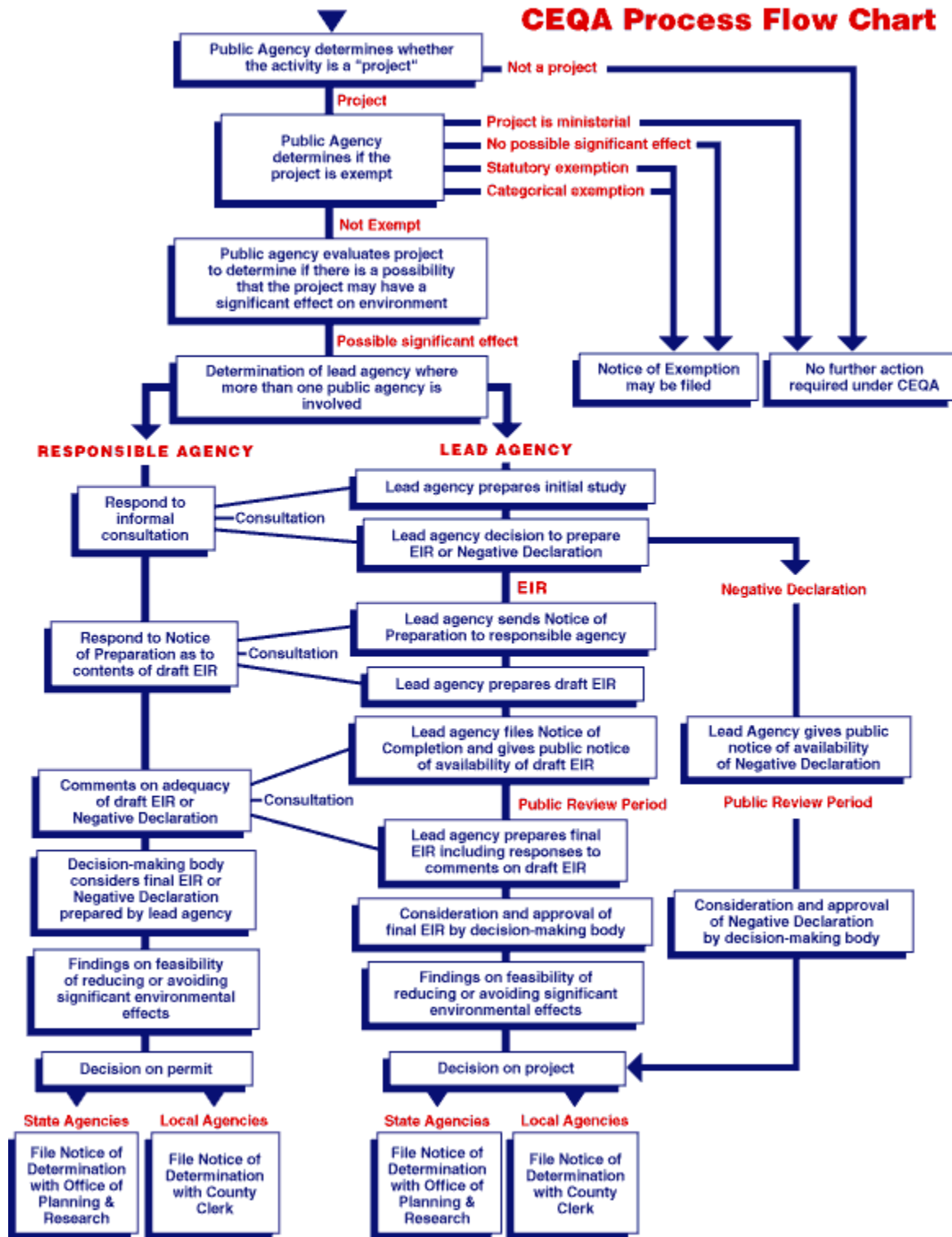
Pixley Irrigation District, as Lead Agency, will make a determination, based on the environmental review for the Environmental Study, Initial Study and comments from the general public, if there are less than significant impacts from the proposed project and the requirements of CEQA can be met by adoption of a Mitigated Negative Declaration.

1.7 Notice of Determination (NOD)

The Lead Agency shall file a Notice of Determination within five working days after deciding to approve the project. The Notice of Determination (CEQA Guidelines, Section 15075) shall include the following:

- (1) An identification of the project including the project title as identified on the proposed negative declaration, its location, and the State Clearinghouse identification number for the proposed negative declaration if the notice of determination is filed with the State Clearinghouse.*
- (2) A brief description of the project.*
- (3) The agency's name and the date on which the agency approved the project.*
- (4) The determination of the agency that the project will not have a significant effect on the environment.*
- (5) A statement that a negative declaration or a mitigated negative declaration was adopted pursuant to the provisions of CEQA.*
- (6) A statement indicating whether mitigation measures were made a condition of the approval of the project, and whether a mitigation monitoring plan/program was adopted.*
- (7) The address where a copy of the negative declaration or mitigated negative declaration may be examined.*
- (8) The Notice of Determination filed with the County Clerk shall be available for public inspection and shall be posted by the County Clerk within 24 hours of receipt for a period of at least 30 days. Thereafter, the clerk shall return the Notice to the Lead Agency with a notation of the period posted.*

1.8 CEQA Process Flow Chart



Section 2

Project Description

Pixley Irrigation District

357 E Olive Ave
Tipton, CA 93272

SECTION 2

Project Description

Project Title: Pixley Recharge Basin

2.1 Project Background & Purpose

The proposed project is intended to benefit water users within the Pixley Irrigation District by increasing groundwater recharge, which will later be used to supplement water resources during dry years. During the years between 2007 and 2010, the Pixley Irrigation District's groundwater levels had dropped significantly, thus prompting the District to begin investigating its current conditions and discover solutions to improve the reliability of local groundwater resources.

The project will involve the construction of a groundwater recharge basin and diversion structure to divert waters from an existing canal into the proposed groundwater recharge basin during wet years. The proposed recharge basin is composed of several cells totaling approximately 160 acres. The depth of the cells will range from 5-15 feet and piping will be used to connect the cells in order to equalize water levels.

The proposed diversion structure will divert water from the existing canal, which runs adjacent to the property and parallel to Highway 99. Minimal piping will be needed to connect the diversion structure to the groundwater recharge basin, as the project will have a looped recharge system with a canal channel on the northeast end to tie back into the canal. Any surface water to be diverted to the recharge basin during operations will include imported surface water, either through purchase, contract, or transfer.

2.2 Project Location

The proposed project is located within Tulare County, a predominantly agricultural region of the California Central Valley. While the terrain within Tulare County can vary, the western portion of the County, where the proposed project is located, encompasses a relatively flat terrain of agricultural land surrounded by compact, interspersed towns. The eastern portion of the County includes the Sierra Nevada mountain range and its surrounding foothills. Agriculture and related industries, such as various sized manufacturing plants and packing and shipping operations, make up most of the economic base for the Valley region.

The proposed project is located in the south-west portion of Tulare County, approximately 2 miles north-west of the unincorporated community of Earlimart. The proposed groundwater recharge basin would cover approximately 160 acres on parcels 314-200-018, 314-200-019, and 316-190-001.

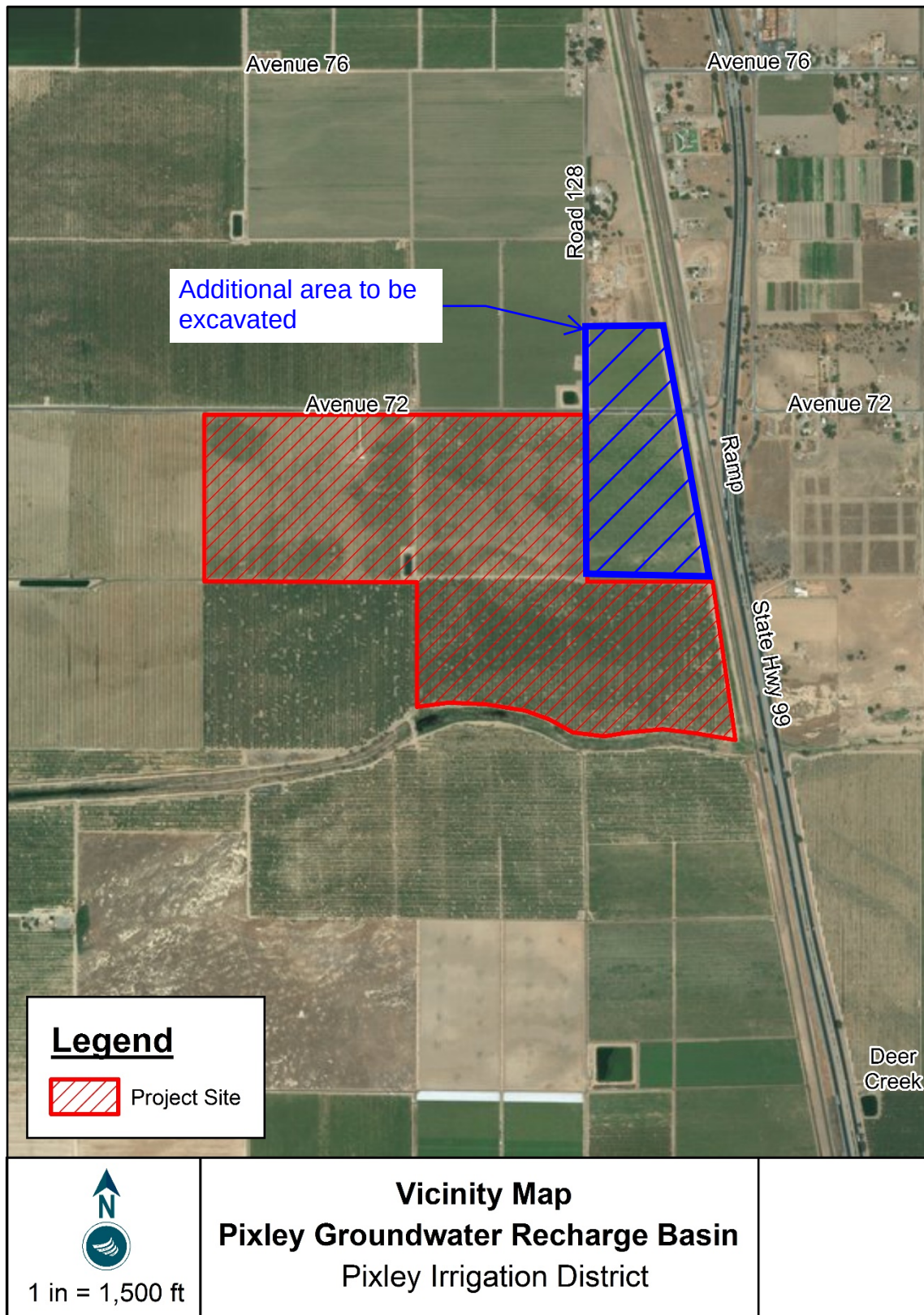
The properties on which the project would be located are designated by Tulare County Zoning Code as AE-40, or agriculture exclusive with a 40-acre parcel size minimum. The proposed project site is bordered by land designated for agricultural use on all sides. The proposed project site is bounded by Avenue 72 to the north, Deer Creek to the south, State Highway 99 to the east, and irrigated agriculture to the west.

2.3 Other Permits and Approvals

Other permits and approvals required for the Pixley Recharge Basin Project are listed below. It should be noted that this list is not exhaustive and additional permits and approvals may also be required.

- *San Joaquin Valley Air Pollution Control District (SJVAPCD)*. The proposed project is within the jurisdiction of the SJVAPCD and will be required to comply with Rule VIII, which is responsible for regulating fugitive dust.
- *Central Valley Regional Water Quality Control Board, SWPPP*. The proposed project site is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). The Central Valley RWQCB will require a Storm Water Pollution Prevention Plan (SWPPP) to prevent impacts related to stormwater as a result of project construction.





Section 3

Evaluation of Environmental Impacts

Pixley Irrigation District

357 E Olive Street
Tipton, CA 93272

SECTION 3

Evaluation of Environmental Impacts

Project Title: Pixley Recharge Basin

This document is the Initial Study/Mitigated Negative Declaration on the proposed construction and operation of several groundwater recharge basins covering approximately 160 acres, an outlet structure, and a 0.2-mile canal to connect the outlet to the groundwater recharge basin. The project is located within Tulare County, approximately 2 miles north-west of the unincorporated community of Earlimart. Pixley Irrigation District will act as the Lead Agency for this project pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

3.1 PURPOSE

The purpose of this environmental document is to implement the California Environmental Quality Act (CEQA). Section 15002(a) of the CEQA Guidelines describes the basic purposes of CEQA as follows.

- (1) Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- (2) Identify the ways that environmental damage can be avoided or significantly reduced.
- (3) Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- (4) Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

This Initial Study of environmental impacts has been prepared to conform to the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations Section 15000 et seq.).

According to Section 15070(a), a Negative Declaration is appropriate if it is determined that:

- (1) The initial study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment.

3.2 INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

1. **Project Title:** Pixley Recharge Basin
2. **Lead Agency:** Pixley Irrigation District
357 E Olive Street
Tipton, CA 93272
(559) 752-5050
3. **Applicant:** Pixley Irrigation District
357 E Olive Street
Tipton, CA 93272
(559) 752-5050
4. **Contact Person:** Eric Limas, General Manager
Pixley Irrigation District
357 E Olive Street
Tipton, CA 93272
(559) 752-5050
5. **Project Location:** The proposed project site is located in the south-west portion of Tulare County, approximately 2 miles north-west of the unincorporated community of Earlimart. The project proposes to construct a groundwater recharge basin composed of several cells covering approximately 160 acres on parcels 314-200-018, 314-200-019, and 316-190-001. The project also proposes a diversion structure, which will pull water off an existing canal between the property and Highway 99. Minimal piping will be needed to connect the diversion structure to the groundwater recharge basin, as the project will likely have a looped recharge system with a canal channel on the northeast end to tie back into the canal. The project site is bordered by a railway to the east, Deer Creek to the south, Almond orchards to the west, and a Vineyard to the north.
6. **General Plan Designation:** The parcels involved in the proposed project are within the Tulare County Rural Valley Lands Planning Area.
7. **Zoning Designation:** The Tulare County Zoning Map designates the parcels involved in the project as AE-40, or Exclusive Agriculture with 40 acre minimum lot size.
8. **Surrounding Land Uses and Settings:**

North	Agriculture, AE40
South	Agriculture, AE40
East	Agriculture, AE40
West	Agriculture, AE40

9. **Project Description:** The proposed project will involve the construction of an outlet, inlet, 0.2 mile canal, and groundwater recharge basin. The purpose of the project is to utilize excess surface water from the Friant Division of the Central Valley Project for groundwater recharge. Any surface water to be diverted to the recharge basin during operations will include imported surface water, either through purchase, contract, or transfer. Construction is proposed to begin in September of 2018 and continue through April of 2020. See Figure 3-2 for site layout.

The proposed groundwater recharge basin is composed of several cells totaling approximately 160 acres. The total capacity of the groundwater recharge basin will be approximately 1337 acre-feet. Piping would be used to connect the cells to equalize water levels. The depth of the cells varies between 5-15 feet.

The proposed diversion structure will divert water from the existing canal, which runs adjacent to the property and parallel to Highway 99. Minimal piping will be needed to connect the diversion structure to the groundwater recharge basin, as the project will have a looped recharge system with a canal channel on the northeast end to tie back into the canal.

10. **Parking and access:** Vehicular access to the project will be available on Avenue 72. A network of unpaved, private roads on the property provides full access to the project site. No new or additional parking spaces are proposed for the project. The project will not require any permanent, on-site employees during project operations. During construction, workers will utilize existing facility parking areas and/or temporary construction staging areas for parking of vehicles and equipment.
11. **Landscaping and Design:** The landscape and design plans will be required at time the project submits for building permit on the project and will be subject to WELO.
12. **Utilities and Electrical Services:** No additional utilities or electrical services will be required for the project. No wastewater will be generated, and all storm water will be contained on-site.
13. **Project Components:** No discretionary approvals required from Tulare County for the proposed project.

Acronyms

BMP	Best Management Practices
CAA	Clean Air Act
CCR	California Code of Regulation
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CWA	California Water Act
DHS	Department of Health Services
FEIR	Final Environmental Impact Report
FPPA	Farmland Protection Policy Act
ISMND	Initial Study Mitigated Negative Declaration
MCL	Maximum Contaminant Level
ND	Negative Declaration
NAC	Noise Abatement Criteria
RCRA	Resource Conservation and Recovery Act of 1976
RWQCB	Regional Water Quality Control Board
SHPO	State Historic Preservation Office
SJVAPCD	San Joaquin Valley Air Pollution Control District
SWPPP	Storm Water Pollution Prevention Plan

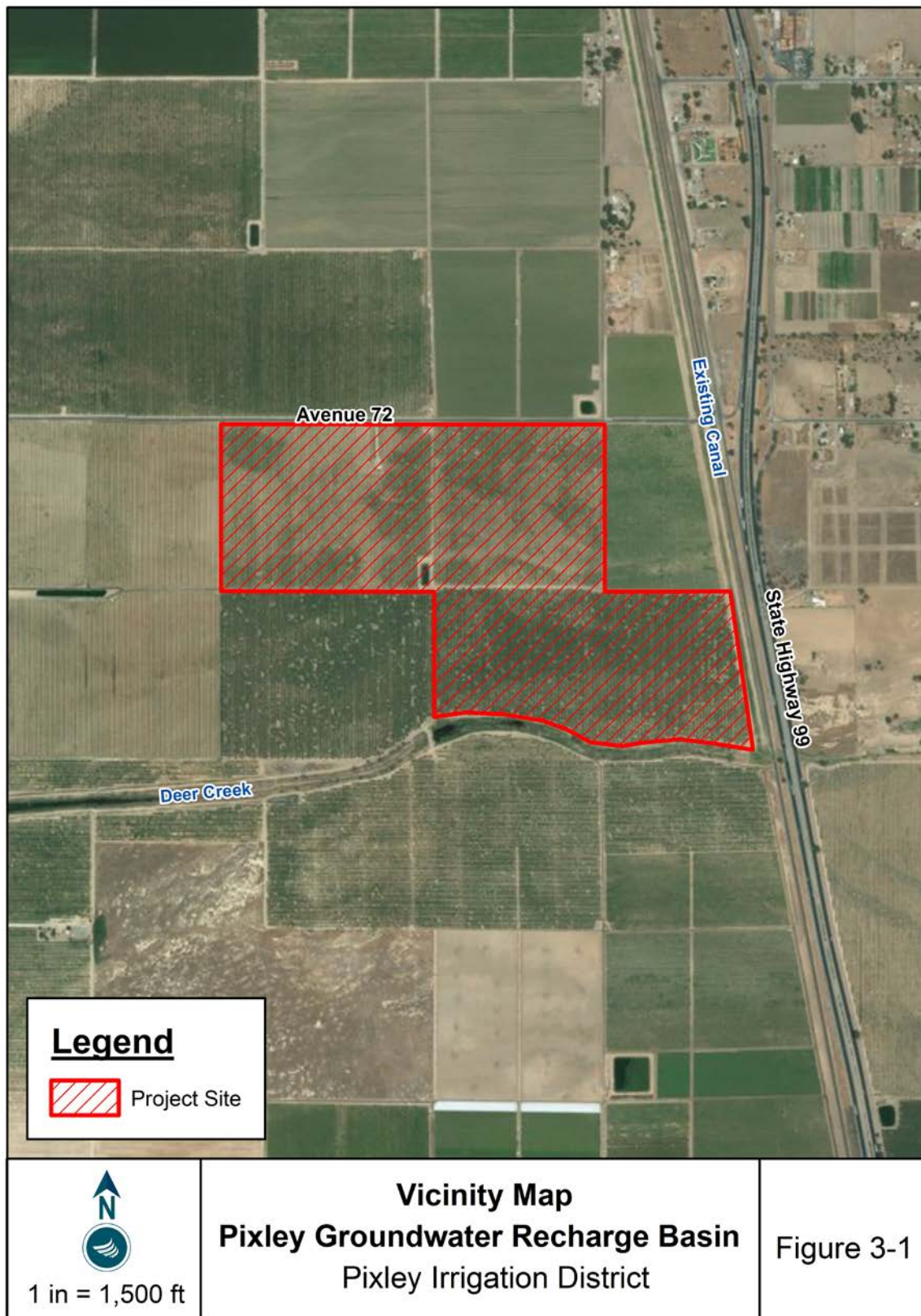




Figure 3-2. Site Plan.

3.3 EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “no Impact” answers that are adequately supported by the information sources a lead agency cites, in the parentheses following each question. A “No Impact” answer is adequately supported if the reference information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less Than Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c) (3)(D). In this case, a brief discussion should identify the following.
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated.” Describe and mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

3.4 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- | | | |
|---|--|---|
| ☐ Aesthetics | ☐ Greenhouse Gas Emissions | ☐ Population |
| ☐ Agriculture and Forest Resources | ☐ Hazards and Hazardous Materials | ☐ Public Services |
| ☐ Air Quality | ☐ Hydrology and Water Quality | ☐ Recreation |
| ☐ Biological Resources | ☐ Land Use and Planning | ☐ Transportation/Traffic |
| ☐ Cultural Resources | ☐ Mineral Resources | ☐ Utilities and Service System |
| ☐ Geology and soils | ☐ Noise | ☐ Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency) Where potential impacts are anticipated to be significant, mitigation measures will be required, so that impacts may be avoided or reduced to insignificant levels.

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION WILL BE PREPARED.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. A Negative Declaration is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is requested.

SIGNATURE

DATE

Eric Limas, General Manager

Pixley Irrigation District

PRINTED NAME

AGENCY

3.5 ENVIRONMENTAL ANALYSIS

The following section provides an evaluation of the impact categories and questions contained in the checklist and identify mitigation measures, if applicable.

I. AESTHETICS

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

Environmental Setting

The EIR for the Tulare County General Plan Update identifies the Sierra Nevada Mountains, Scenic Roadways, and historic settlements and places as the most prominent aesthetic resources within the County.

Sierra Nevada Mountains: The Sierra Nevada mountain range and its foothills stretch along the east area of the county and are a valuable aesthetic resource. Additionally, Sequoia National Park is located within the stretch of the Sierra Nevada Mountains located in Tulare County. Sequoia National Forest is a U.S. National Forest known for its mountain scenery and natural resources. Located directly north of Sequoia National Park is Kings Canyon National Park, a U.S. National Park also known for its towering sequoia trees and scenic vistas. The Sierra Nevada Mountains are not visible from the project site because surrounding orchards obstruct eye level views.

Scenic Roadways: The California Scenic Highway Program was established in 1963 by the state Legislature for the purpose of protecting and enhancing the natural beauty of California highways and adjacent corridors through conservation strategies. The State Scenic Highway System includes a list of highways that have either been officially designated, or are eligible for designation. State laws affiliated with governing the scenic highway program can be found in Sections 260-263 in The Street and Highways Code. The Open Space and Conservation Element of the County General Plan identifies the following County Designated Scenic Roadways:

Tulare County Designated Scenic Highways and Drives: Scenic highways and drives are roads bordered by mature and consistent landscaping that have area wide significance. They can be classified as rural roads that traverse land with outstanding natural scenic qualities, or ones which provide access to regionally significant scenic and recreational areas. The Tulare General Plan Update identifies preserving the rural agricultural characters of SR 99 and SR 65 following County-designated landscaped drives as valuable to the County and its communities:

State Designated Scenic Highway: The California Scenic Highway Mapping System identifies the following officially designated State Scenic Highways and highways eligible for designation:

- State Route 198 from Visalia to Three Rivers
- State Route 190 from Porterville to Ponderosa
- State Route 180 extending through Federal land into northern Tulare County

The following photos demonstrate the aesthetic character of the project area. As shown, the proposed project site is located in an area surrounded by agricultural land uses.



Photo 1: Canal running along eastern portion of project site. Source: 4-Creeks, Inc. 5/31/18



Photo 2: Almond orchards within project site. Source: 4-Creeks, Inc. 5/31/18



*Photo 1: Retention pond within project site
Source: 4-Creeks, Inc. 5/31/18*



*Photo 1: North-east corner of project site
looking west. Source: 4-Creeks, Inc. 5/31/18*



*Photo 1: Infrastructure along northern
boundary of project site.
Source: 4-Creeks, Inc. 5/31/18*



*Photo 2: Deer Creek south of project site.
Source: 4-Creeks, Inc. 5/31/18*

Regulatory Setting

State Scenic Highways: The State Scenic Highway Program is implemented by Caltrans and was developed to preserve the aesthetic quality of certain highway corridors. Highways included in this program are designated as scenic highways. A highway is designated as scenic based on how much of the natural landscape is visible to travelers, the quality of that landscape, and the extent to which development obstructs views of the landscape.

Tulare County General Plan: The Tulare County General Plan includes the following aesthetic resource goals and policies that are potentially applicable to the proposed project and Tulare County's aesthetic value:

LU-7.12 Historic Buildings and Areas: The County shall encourage preservation of buildings and areas with special and recognized historic, architectural, or aesthetic value. New development should respect architecturally and historically significant buildings and areas. Landscaping, original roadways, sidewalks, and other public realm features of historic buildings or neighborhoods shall be restored or repaired where ever feasible.

- SL-1.2 Working Landscapes: The County shall require that new non-agricultural structures and infrastructure located in or adjacent to croplands, orchards, vineyards, and open rangelands be sited so as to not obstruct important viewsheds and to be designed to reflect unique relationships with the landscape by:
 1. Referencing traditional agricultural building forms and materials,
 2. Screening and breaking up parking and paving with landscaping, and
 3. Minimizing light pollution and bright signage.
- SL-1.3 Watercourses: The County shall protect visual access to, and the character of, Tulare County's scenic rivers, lakes, and irrigation canals by:
 1. Locating and designing new development to minimize visual impacts and obstruction of views of scenic watercourses from public lands and right-of-ways, and
 2. Maintaining the rural and natural character of landscape viewed from trails and watercourses used for public recreation.

Discussion

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

No Impact A scenic vista is defined as a viewpoint that provides expansive views of highly valued landscape for the benefit of the general public. The Scenic Landscapes Element of the County General Plan identifies the Sierra Nevada Mountains as the primary scenic vista within the County. The proposed project site is located approximately 20 miles west of the Sierra Nevada Foothills. The low profile of the proposed facilities, in conjunction with the distance between the proposed facilities to the scenic mountain range, would prevent any impacts to scenic vistas from occurring. There is *no impact*.

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

No Impact: There are no Officially Designated State Scenic Highways within Tulare County. Highway 190 is the nearest Eligible State Scenic Highway and is located approximately 10 miles north of the project site. The proposed groundwater recharge basin, pipeline, inlet and outlet would be largely hidden from view by the surrounding orchards. Additionally, the distance between the project site and Highway 190 would further prevent the project from being visible from the Eligible State Scenic Highway. There is *no impact*.

- c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?**

No Impact: The proposed groundwater recharge basin would be recessed below the surrounding elevations and largely hidden from view by the surrounding orchards. The project may be partially visible from highway 99 and nearby county roads. However, because the project is located on land designated as Agriculture, it is not anticipated that the development of the proposed project will create a visually degraded character or quality to the project site or to the properties near and around the project site. Additionally, all of the development will be required to comply with the design review and design limitations required by the General Plan and the County's adopted development guidelines and zoning regulations which require setbacks, landscaping and designs to limit impact to neighboring properties. Therefore, the proposed project would have *no impact* on the visual character of the area.

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

Less than Significant: The project proposes minimal outdoor lighting and does not include any notable reflective materials that could result in impacts to day or night time views. Additional water surface, created by the retention of water in the groundwater recharge basin, may create a limited source of light reflection or glare during peak water levels. However, each groundwater basin cell will be surrounded by approximately 1 ft. of freeboard, which will limit the amount of glare exiting the basin. The impact is *less than significant*.

II. AGRICULTURE AND FOREST RESOURCES:

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forestland or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forestland to non-forest use?	☐	☐	☐	☒

Environmental Setting

As one of the agricultural Counties within the Central San Joaquin Valley, agriculture is a primary driver of the Tulare County economy and is a significant source of regional identity. As such, agricultural lands are a highly valued resource.

The proposed project site is designated as Prime Farmland under the Important Farmland Mapping and Monitoring Program (FMMP) and is under a Williamson Act Contract. The project site is currently operated as an almond orchard. Activities on surrounding properties include grape and almond cultivation.

Regulatory Setting

California Land Conservation Act of 1965: The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, allows local governments to enter into contracts with private landowners to restrict the activities on specific parcels of land to agricultural or open space uses. The landowners benefit from the contract by receiving greatly reduced property tax assessments. The California Land Conservation Act is overseen by the California

Department of Conservation; however local governments are responsible for determining specific allowed uses and enforcing the contract. The Tulare County General Plan states that the requirements for lands under Williamson Act contract are identical to State requirements for these parcels.

California Farmland Mapping and Monitoring Program (FMMP): The FMMP is implemented by the California Department of Conservation (DOC) to conserve and protect agricultural lands within the State. Land is included in this program based on soil type, annual crop yields, and other factors that influence the quality of farmland. The FMMP mapping categories for the most important statewide farmland are as follows:

- **Prime Farmland** has the ideal physical and chemical composition for crop production. It has been used for irrigated production in the four years prior to classification and is capable of producing sustained yields.
- **Farmland of Statewide Importance** has also been used for irrigated production in the four years prior to classification and is only slightly poorer quality than Prime Farmland.
- **Unique Farmland** has been cropped in the four years prior to classification and does not meet the criteria for Prime Farmland or Farmland of Statewide Importance but has produced specific crops with high economic value.
- **Farmland of Local Importance** encompasses farmland that does not meet the criteria for the previous three categories. These may lack irrigation, produce major crops, be zoned as agricultural, and/or support dairy.
- **Grazing Land** has vegetation that is suitable for grazing livestock.

Tulare County General Plan: The Agriculture Element of the Tulare County General Plan includes the following agricultural resource goals and policies that are potentially applicable to the proposed project:

Goal AG-1 To promote the long-term conservation of productive and potentially-productive agricultural lands and to accommodate agricultural-support services and agriculturally-related activities that support the viability of agriculture and further the County's economic development goals.

- AG-1.3 Williamson Act: The County should promote the use of the California Land Conservation Act (Williamson Act) on all agricultural lands throughout the County located outside established UDBs and HDBs. However, this policy carries with it a caveat that support for the Williamson Act as a tax reduction component is premised on continued funding of the State subvention program that offsets the loss of property taxes.
- AG-1.14 Right-to-Farm Noticing: The County shall condition discretionary permits for special uses and residential development within or adjacent to agricultural areas upon the recording of a Right-to-Farm Notice (Ordinance Code of Tulare County, Part VII, Chapter 29, Section 07-29-1000 and following) which is an acknowledgment that

residents in the area should be prepared to accept the inconveniences and discomfort associated with normal farming activities and that an established agricultural operation shall not be considered a nuisance due to changes in the surrounding area.

Tulare County Right to Farm Notice: Tulare County Ordinance No. 2931, also known as the Right-to-Farm Ordinance, was adopted to promote a good neighbor policy between agriculturalists and other residents. By making clear what rights each has when they live near one another, the ordinance protects agricultural land uses from conflicts with non-agricultural uses. It also helps purchasers and residents understand the inconveniences that may occur as the natural result of living in or near agricultural areas. The *Ordinance Code of Tulare County*, Part VII, Chapter 29, Section 07-29-1000 states the following:

TULARE COUNTY RIGHT-TO-FARM NOTICE

The County shall condition discretionary permits for special uses and residential development within or adjacent to agricultural areas upon the recording of a Right-to-Farm Notice (Ordinance Code of Tulare County, Part VII, Chapter 29, Section 07-29-1000 and following) which is an acknowledgment that residents in the area should be prepared to accept the inconveniences and discomfort associated with normal farming activities and that an established agricultural operation shall not be considered a nuisance due to changes in the surrounding area.

Discussion

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

No Impact: The proposed project would involve construction on areas designated as Prime Farmland, however the proposed project will not convert these lands to nonagricultural use. Although the site is no longer used for prime agriculture production, the recharge benefits for the project will help maintain prime agriculture in this area of high overdraft. The proposed project seeks to improve groundwater availability, and would ultimately protect the viability of existing agricultural activities in the area by increasing the groundwater supply for future ag water demand. There will be no conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Therefore, the project has no impact.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act Contract?

No Impact: The proposed project site is under a Williamson Act Contract with Tulare County; however, the proposed project is not considered to be in conflict with Williamson Act provisions. California Government Code Article 2.5 Section 51238 states that displacement of agricultural operations may be compatible with Williamson Act provisions if the activity relates directly to the production of commercial agricultural products on the subject contract parcel or parcels or neighboring lands. Because the proposed project would allow Pixley Irrigation District to store water for future use, and Pixley Irrigation District only services agricultural water users, the proposed project relates directly to the production of agricultural products on other properties within the district. The proposed project would ultimately support agricultural viability in Tulare County by allowing Pixley Irrigation District to recharge groundwater with excess surface waters during wet years to be stored and used to sustain agricultural production during dry years. *There is no impact.*

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

No Impact: The project site is not zoned for forest or timberland production and there is no zone change proposed for the site. Therefore, *no impacts* would occur.

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

No Impact: No conversion of forestland, as defined under Public Resource Code or General Code, will occur as a result of the project and there would be *no impacts*.

e) Would the project 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 forestland to non-forest use?

No Impact: The project site is in an area which is presently under active agriculture use. The implementation of this project would cause minor disturbance to farmland during project construction, however the project itself is supplemental to agricultural production and agricultural activities could be reinstated in the future. Implementation of the project would not result in the conversion of farmland to nonagricultural use and there is *no impact*.

III. AIR QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Environmental Setting

Air pollution is directly related to regional topography. Topographic features can either stimulate the movement of air or restrict air movement. California is divided into regional air basins based on topographic air drainage features. The proposed project site is within the San Joaquin Valley Air Basin, which is bordered by the Sierra Nevada Mountains to the east, Coastal Ranges to the west, and the Tehachapi Mountains to the south.

The mountain ranges surrounding the San Joaquin Valley Air Basin (SJVAB) serve to restrict air movement and prevent the dispersal of pollution. As a result, the SJVAB is highly susceptible to pollution accumulation over time. As shown in the Table 1, the SJVAB is in nonattainment for several pollutant standards.

Valley Fever: Valley Fever is an illness caused by a fungus (*Coccidioides immitis* and *C. posadasii*) that grows in soils under certain conditions. Favorable conditions for the Valley Fever fungus include low rainfall, high summer temperatures, and moderate winter temperatures. In California, the counties with the highest incident of Valley Fever are Fresno, Kern and Kings counties. When soils are disturbed by wind or activities like construction and farming, Valley Fever fungal spores can become airborne. The spores present a potential health hazard when inhaled. Individuals in occupations such as construction, agriculture, and archaeology have a higher risk of exposure due to working in areas of disturbed soils which may have the Valley Fever fungus.

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – One hour	No Federal Standard ^f	Nonattainment/Severe
Ozone – Eight hour	Nonattainment/Extreme ^e	Nonattainment
PM 10	Attainment ^c	Nonattainment
PM 2.5	Nonattainment ^d	Nonattainment
Carbon Monoxide	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment/Unclassified	Attainment
Lead (Particulate)	No Designation/Classification	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified
Vinyl Chloride	No Federal Standard	Attainment

^a See 40 CFR Part 81

^b See CCR Title 17 Sections 60200-60210

^c On September 25, 2008, EPA redesignated the San Joaquin Valley to attainment for the PM10 National Ambient Air Quality Standard (NAAQS) and approved the PM10 Maintenance Plan.

^d The Valley is designated nonattainment for the 1997 PM2.5 NAAQS. EPA designated the Valley as nonattainment for the 2006 PM2.5 NAAQS on November 13, 2009 (effective December 14, 2009).

^e Though the Valley was initially classified as serious nonattainment for the 1997 8-hour ozone standard, EPA approved Valley reclassification to extreme nonattainment in the Federal Register on May 5, 2010 (effective June 4, 2010).

^f Effective June 15, 2005, the U.S. Environmental Protection Agency (EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB.

Table 3-1. San Joaquin Valley Attainment Status; Source: SJVAPCD

Regulatory Setting

Federal Clean Air Act – The 1977 Federal Clean Air Act (CAA) authorized the establishment of the National Ambient Air Quality Standards (NAAQS) and set deadlines for their attainment. The Clean Air Act identifies specific emission reduction goals, requires both a demonstration of reasonable further progress and an attainment demonstration, and incorporates more stringent sanctions for failure to meet interim milestones. The U.S. EPA is the federal agency charged with administering the Act and other air quality-related legislation. EPA’s principal function include setting NAAQS; establishing minimum national emission limits for major sources of pollution; and promulgating regulations. Under CAA, the NCCAB is identified as an attainment area for all pollutants.

California Clean Air Act – California Air Resources Board coordinates and oversees both state and federal air pollution control programs in California. As part of this responsibility, California Air Resources Board monitors existing air quality, establishes California Ambient Air Quality Standards, and limits allowable emissions from vehicular sources. Regulatory authority within established air basins is provided by air pollution control and management districts, which control stationary-source and most categories of area-source emissions and develop regional air quality plans. The project is located within the jurisdiction of the San Joaquin Valley Air Pollution Control District.

The state and federal standards for the criteria pollutants are presented in Section 8.4 of The San Joaquin Valley Unified Air Pollution Control District’s 2015 “Guidance for Assessing and

Mitigating Air Quality Impacts” (see Table 1, below). These standards are designed to protect public health and welfare. The “primary” standards have been established to protect the public health. The “secondary” standards are intended to protect the nation’s welfare and account for air pollutant effects on soils, water, visibility, materials, vegetation and other aspects of general welfare. The U.S. EPA revoked the national 1-hour ozone standard on June 15, 2005, and the annual PM₁₀ standard on September 21, 2006, when a new PM_{2.5} 24-hour standard was established.

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O₃)	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet 8 Hour Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.075 ppm (147 µg/m ³)		
Respirable Particulate Matter (PM₁₀)	24 Hour	50 µg/m	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Annual Analysis
	Annual Arithmetic Mean	20 µg/m ³		--		
Fine Particulate Matter (PM_{2.5})	24 Hour		Gravimetric or Beta Attenuation	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Annual Analysis
	Annual Arithmetic Mean	12 µg/m ³		15 µg/m ³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	--	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	--	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		--	--	
Nitrogen Dioxide (NO₂)⁸	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	--	Gas Phase Annual Chemiluminescence
	Arithmetic Mean	0.030 ppm (57 µg/m ³)		53 ppb (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	--	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	--		--	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ⁹	--	
	Annual Arithmetic Mean	--		0.030 ppm (for certain areas) ⁹	--	

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Lead ^{10,11}	30 Day Average	1.5 µg/m ³	Atomic Absorption	--	--	High Volume Sampler and Atomic Absorption
	Calendar Quarter	--		1.5 µg/m3 (for certain areas) ¹¹	Same as Primary Standard	
	Rolling 3-Month Average	--		0.15 µg/m ³		
Visibility Reducing Particles ¹²	8 Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	No National Standard		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹⁰	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.

9. On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

10. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

11. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

12. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Table 3-2. Ambient Air Quality Standards; Source: SJVAPCD

San Joaquin Valley Air Pollution Control District (SJVAPCD) – The SJVAPCD is responsible for enforcing air quality standards in the project area. To meet state and federal air quality objectives, the SJVAPCD adopted the following thresholds of significance for projects:

Pollutant/Precursor	Construction Emissions	Operational Emissions	
		Permitted Equipment and Activities	Non-Permitted Equipment and Activities
	Emissions (tpy)	Emissions (tpy)	Emissions (tpy)
CO	100	100	100
Nox	10	10	10
ROG	10	10	10
SOx	27	27	27
PM10	15	15	15
PM2.5	15	15	15

Table 3-3. SJVAPCD Thresholds of Significance for Criteria Pollutants; Source: SJVAPCD

The following SJVAPCD rules and regulations may apply to the proposed project:

- **Rule 3135:** Dust Control Plan Fee. All projects which include construction, demolition, excavation, extraction, and/or other earth moving activities as defined by Regulation VIII (Described below) are required to submit a Dust Control Plan and required fees to mitigate impacts related to dust.
- **Rule 4101:** Visible Emissions. District Rule 4101 prohibits visible emissions of air contaminants that are dark in color and/or have the potential to obstruct visibility.
- **Rule 9510:** Indirect Source Review (ISR). This rule reduces the impact PM10 and NOX emissions from growth on the SJVB. This rule places application and emission reduction requirements on applicable development projects in order to reduce emissions through onsite mitigation, offsite SJVAPCD administered projects, or a combination of the two. This project will submit an Air Impact Assessment (AIA) application in accordance with Rule 9510's requirements.
- **Regulation VIII:** Fugitive PM10 Prohibitions. Regulation VIII is composed of eight rules which together aim to limit PM10 emissions by reducing fugitive dust. These rules contain required management practices to limit PM10 emissions during construction, demolition, excavation, extraction, and/or other earth moving activities.

Discussion

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

No Impact: The proposed project is located within the boundaries of the San Joaquin Valley Air Pollution Control District (SJVAPCD) and would result in air pollutant emissions that are regulated by the air district during both its construction and operational phases. The SJVAPCD is responsible for bringing air quality in Tulare County into compliance with federal and state air quality standards. The air district has Particulate Matter (PM) plans, Ozone Plans, and Carbon Monoxide Plans that serve as the clean air plan for the basin.

Together, these plans quantify the required emission reductions to meet federal and state air quality standards and provide strategies to meet these standards. The SJVAPCD adopted the Indirect Source Review (ISR) Rule in order to fulfill the District's emission reduction commitments in its PM10 and Ozone (NOx) attainment plans and has since determined that implementation and compliance with ISR would reduce the cumulative PM10 and NOx impacts anticipated in the air quality plans to a less than significant level.

Construction Phase. Project construction will involve construction of the proposed groundwater recharge basin, an outlet to divert water from the existing canal, and a canal to channel water from the outlet to the proposed groundwater recharge basins. The construction related emissions from these activities were calculated using CalEEMod. The full CalEEMod Report can be found in Appendix A. As shown in Table 2 below, project construction related emissions do not exceed the thresholds established by the SJVAPCD.

	CO (tpy)	ROG (tpy)	SOx (tpy)*	Nox (tpy)	PM10 (tpy)	PM2.5 (tpy)
Emissions Generated from Project Construction	5.7763	0.8759	0.0130	8.2328	2.6051	1.3211
SJVAPCD Air Quality Thresholds of Significance	100	10	27	10	15	15
*Threshold established by SJVAPCD for SOx, however emissions are reported as SO2 by CalEEMod.						

Table 3-4. Projected Project Emissions Compared to SJVAPCD Thresholds of Significance for Criteria Pollutants related to Construction; Source: SJVAPCD, CalEEMod Analysis (Appendix A)

Operational Phase. Significant generation of emissions will not occur as a result of project operations. Flood waters will be diverted from the existing canal using passive gravitational flows and will not require pumps or energy to operate. As such, the proposed project does not include any permanent powered equipment for use during project operations and the project would not require permanent, on-site personnel. Site visits would occur approximately 3 times per week for maintenance activities. Because

project operations would not utilize any mechanical equipment, and trip generation as a result of project implementation would be negligible, emissions related to project operations would be less than significant.

Because emissions related to project operations would be negligible, construction related emissions are below the thresholds of significance established by the SJVAPCD, the project would not conflict with an applicable air quality plan and there is *no impact*.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact: The SJVAPCD is responsible for bringing air quality in Tulare County into compliance with federal and state air quality standards. The significance thresholds and rules developed by the SJVAPCD are designed to prevent projects from violating air quality standards or significantly contributing to existing air quality violations. As discussed above, construction related emissions from the project will not exceed thresholds established by the SJVAPCD, and emissions related to project operations would be minimal. The project will comply with all applicable SJVAPCD rules and regulations, which will further reduce the potential for any significant impacts related to air quality as a result of project implementation. Because these thresholds and regulations are designed to achieve and/or maintain federal and state air quality standards, and the project is compliant with these thresholds and regulations, the project will not violate an air quality standard or significantly contribute to an existing air quality violation. The impact is *less than significant*.

c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?

Less Than Significant Impact: The SJVAPCD accounts for cumulative impacts to air quality in Section 1.8 “Thresholds of Significance – Cumulative Impacts” in its 2015 Guide for Assessing and Mitigating Air Quality Impacts. The SJVAPCD considered basin-wide cumulative impacts to air quality when developing its significance thresholds. Because construction emissions are below the significance thresholds adopted by the air district, and compliance with SJVAPCD rules will address any cumulative impacts regarding operational emissions, impacts regarding cumulative emissions would be *less than significant*.

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

Less Than Significant Impact: Emissions will be generated during construction and (less so) operation of the proposed project. Emissions generated during construction and operation will be regulated by the SJVAPCD and there are no sensitive receptors directly

adjacent to the project site. The project site is surrounded by agricultural land uses and is not located near land designated for residential use. Because the project will comply with all thresholds and regulations established by the SJVAPCD, and there are no sensitive receptors adjacent to the project site, the impact would be *less than significant*.

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

Less Than Significant Impact: Standing water does have the potential to be a source of odor. However, this odor would be temporary, typical to other agricultural odors and would not impact a substantial number of people. Odors from standing water would be temporary, as water would only be diverted into the proposed groundwater recharge basin during flood events, and all diverted water would infiltrate through the soil to replenish groundwater resources. Additionally, very few people would be affected by these temporary odors. The subject property is surrounded on all sides by land designated for agricultural use. The project would result in typical construction odors during construction. However there are no sensitive receptors adjacent to the project site and any odors generated from project construction would be temporary and common to any construction activity.

Because odors generated during project construction and operation would be temporary, relatively insignificant, and would not affect a significant number of people, the impact is *less than significant*.

IV. BIOLOGICAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	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 & Game or U.S. fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wet-lands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through director removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion for this section originates from the Biological Evaluation that was prepared for this project by Live Oak Associates, Inc. to identify sensitive biological resources, provide project impact analysis, and suggest mitigation measures. The full document can be found in Appendix B.

Environmental Setting

The project site is located in the southern San Joaquin Valley. The San Joaquin Valley is bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coastal ranges to the west, and the Sacramento-San Joaquin Delta to the north.

Like most of California, the southern San Joaquin Valley (and the project site) experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures commonly exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely exceed 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation in the vicinity of the project site is about 9 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain.

Deer Creek originates in the Greenhorn Mountains of the Sierra Nevada, some 40 miles east of the project site, at an elevation of approximately 7,500 feet. It enters the San Joaquin Valley near Terra Bella, and flows through the valley for approximately 30 miles, feeding a series of irrigation ditches and canals along the way. Its channel in the valley is highly modified, having been realigned, reinforced with levees, and largely cleared of the riparian vegetation it once supported.

The project site is situated within a matrix of largely agricultural lands. It is bordered to the north by almond orchards and vineyards, and to the east by vineyards and the SR 99 transportation corridor. It is bordered to the south by Deer Creek and, beyond that, pistachio and almond orchards. It is bordered to the west by almond orchards.

Biotic Habitats/Land Uses

Five biotic habitats / land use types were identified on the project site during the field survey: orchard, ruderal, residential, tailwater basin, and irrigation canal (Figure 3 of Appendix B). These habitats / land uses and their constituent plant and animal species are described in more detail in the following sections. A list of the vascular plant species observed within the project site and the terrestrial vertebrates using, or potentially using, the site's habitats are provided in Appendices A and B of Appendix B, respectively. Selected photographs of the project site are presented in Appendix C of Appendix B.

Orchard

At the time of the field survey, the project site consisted primarily of almond orchard. The northerly portion of the orchard was fairly young, while the southerly portion contained large, senescent trees near the end of their productive life. The older portion had a closed canopy and was almost entirely barren in the understory, save sporadic weeds such as mallow (*Malva* sp.) and white-stemmed filaree (*Erodium moschatum*). The younger portion had a relatively open canopy; the sunny gaps between the trees supported common chickweed (*Stellaria media*), Canadian horseweed (*Erigeron canadensis*), and other common weeds.

Due to intensive disturbance and the lack of aquatic habitat, orchards provide marginal habitat for amphibians; however, Pacific tree frogs (*Pseudacris regilla*) and western toads (*Bufo boreas*) may disperse through these lands during the winter and spring. Common

reptiles such as the western fence lizard (*Sceloporus occidentalis*), Pacific gopher snake (*Pituophis catenifer catenifer*), and California kingsnake (*Lampropeltis californiae*) may occasionally occur in the orchards of the project site, especially where the trees are younger and sunshine more abundant.

Orchards provide foraging and nesting habitat for a number of avian species. The project site's mature almond trees could be used for nesting by the American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*), and western kingbird (*Tyrannus verticalis*). Winter migrants such as the white-crowned sparrow (*Zonotrichia leucophrys*) may forage on dormant buds in the orchards, while resident birds such as the house finch (*Haemorhous mexicanus*) would be expected to forage on ripening fruit.

A few small mammal species would be expected to occur within the orchards of the project site. These include deer mice (*Peromyscus maniculatus*), California voles (*Microtus californicus*), Botta's pocket gophers (*Thomomys bottae*), Audubon's cottontail (*Sylvilagus audubonii*), and black-tailed hare (*Lepus californicus*). At the time of the field survey, a black-tailed hare was observed in the orchard, and gopher burrows were relatively prevalent in the younger portion of the orchard. Various species of bat may forage over the project site's orchard habitat for flying insects, or glean insects from the leaves of trees.

Foraging raptors and mammalian predators may occur in the orchards of the project site from time to time. Raptors adapted to hunt within the tree canopy such as Cooper's hawks (*Accipiter cooperii*) and sharp-shinned hawks (*Accipiter striatus*) may forage for small birds in orchards. Mammalian predators potentially occurring in the orchards of the project site are expected to include raccoons (*Procyon lotor*) and red foxes (*Vulpes vulpes*).

Ruderal

Ruderal (disturbed) areas consisted of the roads and road margins of the project site, the perimeter of the tailwater basin, and a cleared area associated with a well and other agricultural infrastructure. At the time of the field survey, ruderal areas of the project site were either barren or sparsely vegetated with common weed species such as Bermuda grass (*Cynodon dactylon*) and puncturevine (*Tribulus terrestris*).

Although the wildlife habitat value of the project site's ruderal lands is relatively low, these lands certainly support some wildlife species. The reptile and amphibian species listed for orchards could potentially use ruderal habitats of the project site, as well. Mourning doves and northern mockingbirds (*Mimus polyglottos*) could be expected to occur on these ruderal lands, as could the disturbance-tolerant killdeer (*Charadrius vociferous*), which often nests on gravel or bare ground. Common raptors such as the red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*) may occasionally fly over the site's ruderal areas in search of small vertebrate and invertebrate prey.

Small mammals that would be expected to occur on ruderal lands of the project site include

Botta's pocket gophers, deer mice, California voles, California ground squirrels (*Otospermophilus beecheyi*), and house mice (*Mus musculus*). Mammalian predators with the potential to occur on ruderal lands of the project site include disturbance-tolerant species such as the raccoon, red fox, and coyote (*Canis latrans*).

Residential

The project site contained one residence. It was situated in a clearing within the almond orchard, approximately 300 feet south of Avenue 72. The residence included a home, an outbuilding, animal enclosures, and compacted dirt surfaces surrounding all of the structures. Landscaping was minimal, consisting of a single fan palm (*Washingtonia* sp.) and several ornamental shrubs.

At the time of the field survey, the residence appeared to be vacant.

The project site's residence offers limited wildlife habitat owing to its lack of vegetation and highly disturbed nature. However, several animal species adapted to human disturbance have the potential to occur here. Amphibians such as Pacific tree frogs and western toads might disperse across the residential area during the winter and spring, and reptiles such as the western fence lizard and common garter snake could forage in this land use type. Buildings and other humanmade structures provide potential nesting habitat for the house finch and black phoebe (*Sayornis nigricans*), as well as several non-native birds including the house sparrow (*Passer domesticus*), and Eurasian collared dove (*Streptopelia decaocto*). Mammal species attracted to residential areas include the house mouse, Virginia opossum, and Norway rat (*Rattus norvegicus*).

Tailwater Basin

The project site included a small tailwater basin, located at the northwest corner of the Avenue 70 and Road 126 alignments. At the time of the field survey, the basin was inundated to a depth of approximately six feet near its center. The lower banks were sparsely vegetated with bog yellow cress (*Rorippa palustris*) and shepherd's purse (*Capsella bursa-pastoris*), while the upper banks were unvegetated.

Wildlife use of the tailwater basin would vary depending on the timing and degree to which the basin is inundated or saturated. During periods of inundation, Pacific tree frogs and western toads could opportunistically breed in the basin and subsequently disperse through surrounding lands. During dry periods, reptile use of the basin would be similar to that described for other land use types of the project site.

Birds expected to use the basin during periods of inundation may include the great blue heron (*Ardea herodias*) and great egret (*Ardea alba*), assuming amphibian and/or invertebrate prey is present. Black phoebes may glean insects from the surface of the water, or extract mud from the banks for nest-building. When the basin is saturated but not inundated, avian use may include those species that feed on mudflats, such as the killdeer.

When the basin is dry, avian use would be similar to that described for ruderal habitats of the project site.

Periodic inundation likely precludes occupation of the basin floor by burrowing rodents; however, deer mice and western harvest mice (*Reithrodontomys megalotis*) could inhabit the margins of the basin and could forage for insects, seeds, and plant parts in the basin when dry. Mammalian predator and raptor use of the basin would be similar to that described for other habitats of the project site.

Irrigation Canal

The project site contains two short segments of an unnamed PID irrigation canal. The canal was flowing at the time of the field surveys. Analysis of historical aerial imagery indicates it is not perennially inundated, however. The canal has earthen bed and banks, and appears regularly maintained. At the time of the field survey, it was primarily barren of vegetation.

Due to intensive maintenance practices, the project site's irrigation canal would be of limited value to native wildlife. However, the Pacific chorus frog and western toad may breed in the canal during periods of inundation, incidentally attracting predatory wading birds such as the great blue heron and great egret. Black phoebes may hunt insects in flight over the canal, or glean prey from the surface of the water. Black phoebes and cliff swallows (*Petrochelidon pyrrhonata*) may also use the canal as a source of mud for their nests. Fossorial rodents including the Botta's pocket gopher and California ground squirrel may burrow in the banks of the canal.

Regulatory Setting

Federal Endangered Species Act (FESA): defines an *endangered species* as "any species or subspecies that is in danger of extinction throughout all or a significant portion of its range." A threatened species is defined as "any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."

The Federal Migratory Bird Treaty Act (FMBTA: 16 USC 703-712): FMBTA prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all birds native to the United States, even those that are non-migratory. The FMBTA encompasses whole birds, parts of birds, and bird nests and eggs.

Although the USFWS and its parent administration, the U.S. Department of the Interior, have traditionally interpreted the FMBTA as prohibiting incidental as well as intentional "take" of birds, a January 2018 legal opinion issued by the Department of the Interior now states that

incidental take of migratory birds while engaging in otherwise lawful activities is permissible under the FMBTA. However, California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the FMBTA (Section 3513), as well as any other native non-game bird (Section 3800), even if incidental to lawful activities.

Birds of Prey (CA Fish and Game Code Section 3503.5): Birds of prey are protected in California under provisions of the Fish and Game Code (Section 3503.5), which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks and eagles) or Strigiformes (owls), as well as their nests and eggs. The bald eagle and golden eagle are afforded additional protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

Clean Water Act: Section 404 of the Clean Water Act of (1972) is to maintain, restore, and enhance the physical, chemical, and biological integrity of the nation's waters. Under Section 404 of the Clean Water Act, the US Army Corps of Engineers (USACE) regulates discharges of dredged and fill materials into "waters of the United States" (jurisdictional waters). Waters of the US including navigable waters of the United States, interstate waters, tidally influenced waters, and all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries.

California Endangered Species Act (CESA): prohibits the take of any state-listed threatened and endangered species. CESA defines *take* as "any action or attempt to hunt, pursue, catch, capture, or kill any listed species." If the proposed project results in a take of a listed species, a permit pursuant to Section 2080 of CESA is required from the CDFG.

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 & Game or U.S. fish and Wildlife Service?

Less Than Significant Impact with Mitigation Incorporation: Based on the existing conditions of the project site and vicinity, there is potential for special status species to occur within the vicinity of the project site (See Table 1, Appendix B). Implementation of Mitigation Measures BIO-1a, BIO-1b, BIO-1c, BIO-1d, BIO-1e, BIO-2a, BIO-2b, and BIO-3a, BIO-3b, BIO-3c, BIO-4a, BIO-4b, BIO-5a, BIO-5b, BIO-5c, BIO-6a, BIO-6b, BIO-6c, and BIO-6d will ensure that impacts to species identified as a candidate, sensitive, or special status will be *less than significant with mitigation incorporation*.

Special Status Animal Species

San Joaquin Kit Fox

By the time the San Joaquin kit fox (SJKF) was listed as federally endangered in 1967 and California threatened in 1971, it had been extirpated from much of its historic range. The smallest North American member of the dog family (Canidae), the kit fox historically occupied the dry plains of the San Joaquin Valley, from San Joaquin County to southern Kern County (Grinnell et al. 1937). Local surveys, research projects, and incidental sightings indicate that kit fox currently occupy available habitat on the San Joaquin Valley floor and in the surrounding foothills. Core SJKF populations are located in the natural lands of western Kern County, the Carrizo Plain Natural Area in San Luis Obispo County, and the Ciervo-Panoche Natural Area in western Fresno and eastern San Benito Counties (USFWS 1998).

The SJKF prefers habitats of open or low vegetation with loose soils. In the southern and central portion of the Central Valley, kit fox are found in valley sink scrub, valley saltbrush scrub, upper Sonoran subshrub scrub, and annual grassland (USFWS 1998). Kit fox may also be found in grazed grasslands, urban settings, and in areas adjacent to tilled or fallow fields (USFWS 1998). They require underground dens to raise pups, regulate body temperature, and avoid predators and other adverse environmental conditions (Golightly and Ohmart 1984). In the central portion of their range, they usually occupy burrows excavated by small mammals such as California ground squirrels. The SJKF is primarily carnivorous, feeding on black-tailed hares, desert cottontails, rodents, insects, reptiles, and some birds.

The project site is generally unsuitable for kit fox, dominated as it is by intensively maintained orchards. However, ruderal areas of the site could conceivably be used for denning. Deer Creek, which adjoins the site to the south, may represent a movement corridor for kit fox in the project vicinity. It interconnects several large blocks of natural land, including the Pixley National Wildlife Refuge's Big Deer Creek Unit and Dickey Tract. The Dickey Tract is located just 0.3 mile west of the project site.

Kit fox have historically been well-documented in the project vicinity. The CNDDDB lists 36 occurrences of the SJKF within 10 miles of the site; the closest of these is a 1975 occurrence recorded 1.5 miles to the southwest. The occurrences were primarily recorded in natural lands; however, six occurrences from the 1970s are on agricultural properties. All but seven of the occurrences are from 20 or more years ago, with the most recent recorded in 2004. Notwithstanding the lack of recent occurrences and the poor quality of most of the on-site habitats, it is possible that individuals pass through, forage within, and possibly even den on the site from time to time.

The project will not result in significant loss of habitat for the San Joaquin kit fox because the site's habitats are marginally suitable, at best, for this species under existing conditions, and similar or higher quality habitat is regionally abundant. Moreover, the project will convert approximately 160 acres of orchard habitat generally unsuitable for the SJKF to a

groundwater recharge basin of modest suitability. The basin, when dry, could be used for foraging by this species, and its banks could possibly be used for denning from time to time.

The following measures adapted from the U.S. Fish and Wildlife Service 2011 Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance (Appendix E) will be implemented.

Mitigation Measure BIO-1a: Preconstruction surveys for the San Joaquin kit fox shall be conducted on and within 200 feet of the project site, no less than 14 days and no more than 30 days prior to the start of ground disturbance activities on the site. The primary objective is to identify kit fox habitat features (e.g., potential dens and refugia) on and adjacent to the site and evaluate their use by kit foxes. Preconstruction surveys will be repeated following any lapses in construction of 30 days or more.

Mitigation Measure BIO-1b: Should active kit fox dens be detected during preconstruction surveys, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified. A disturbance-free buffer will be established around the burrows in consultation with the USFWS and CDFW, to be maintained until an agency-approved biologist has determined that the burrows have been abandoned.

Mitigation Measure BIO-1c: Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes in accordance with the USFWS Standardized Recommendations. The applicant shall implement all minimization measures presented in the Construction and On-going Operational Requirements section of the Standardized Recommendations, including, but not limited to: restriction of project related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g. pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash. See Appendix E of Appendix B for more details.

Mitigation Measure BIO-1d: Prior to the start of construction, the applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat needs; a report of the occurrence of kit fox in the project vicinity; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation. The training will include a handout with all of the training information included in it. The applicant will use this handout to train any construction personnel that were not in attendance at the first meeting, prior to those personnel starting work on the site.

Mitigation Measure BIO-1e: The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.

Implementation of these measures will reduce potential impacts to the San Joaquin kit fox to a less than significant level under CEQA and ensure compliance with state and federal laws protecting this species.

Bakersfield Legless Lizard

In 2013, California's sole species of legless lizard, *Anniella pulchra*, was divided into five species based on findings by Parham and Papenfuss (2008, 2013) that *A. pulchra* encompassed five separately-evolving lineages. Four new species, including the Bakersfield legless lizard (*Anniella grinnelli*), were described, and *A. pulchra* was redefined as a small regional subset of its former population.

The Bakersfield legless lizard is restricted to the southern San Joaquin Valley and the eastern Carrizo Plain, with several populations documented within Bakersfield city limits. As it is a newly-described species, little is known of its life history and behavior. At present, it is assumed to have similar habitat requirements to *A. pulchra*, occurring in warm, moist soil in a variety of ecosystems including chaparral, desert scrub, and riparian. As with *A. pulchra*, it is thought to live primarily underground, burrowing into loose soil or leaf litter under trees and shrubs. It may also be found under surface objects such as rocks and logs. It is assumed that, like *A. pulchra*, it generally does not bask in direct sunlight.

The riparian corridor of Deer Creek, which lies immediately to the south of the project site, likely represents suitable habitat for this species. Should lizards occur along Deer Creek, they could conceivably bask on the access road that runs along the site's southern boundary. Several Bakersfield legless lizards were collected by T. Papenfuss approximately 2 miles west of the project site in 2016 and 2017 (CDFW 2018). The lizards were found along the dirt levee road fronting Deer Creek.

The project will not result in significant loss of habitat for the Bakersfield legless lizard because the site's habitats are generally unsuitable for this species under existing conditions. The only portion of the site on which the Bakersfield legless lizard could reasonably be expected to occur is the Deer Creek access road, and that road will not be permanently impacted by the project.

The applicant will implement the following measures for the protection of the Bakersfield legless lizard.

Mitigation Measure BIO-2a: Project-related vehicular and equipment travel along the Deer Creek access road shall observe a speed limit of 10 mph. During travel along this road, vehicle and equipment operators shall continually scan for lizards and snakes. If lizards or snakes are observed on the road, the operator will stop the vehicle/equipment, and wait for the animals to move off the road before resuming travel.

Mitigation Measure BIO-2b: A description of this species and measures to avoid mortality will be included and presented in the employee education program described above in Mitigation Measure BIO-1d.

Implementation of the above measures will reduce potential project impacts to the Bakersfield legless lizard to a less than significant level under CEQA.

Burrowing Owl

The burrowing owl is primarily a grassland species, but may also occur in open shrub lands, grazed pastures, and occasionally agricultural lands. The primary indicators of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation, with only sparse areas of shrubs or taller vegetation. Burrowing owls roost and nest in the burrows of California ground squirrels, and occasionally also badger, coyote, or fox. The burrowing owl diet includes a broad array of arthropods, small rodents, birds, reptiles, and amphibians. In California, burrowing owl survival and reproductive success appears linked to rodent populations, particularly California vole (*Microtus californicus*) (Gervais et al. 2006). In agricultural areas of the San Joaquin Valley, burrowing owls primarily forage within 600 meters of their nest burrows (Gervais et al. 2003). The burrowing owl was designated a California Species of Special Concern in 1978 following long-term population decline, primarily due to loss of habitat to development and agricultural practices.

Although the project site is largely unsuitable for the burrowing owl, consisting almost entirely of almond orchards, open areas of the site could conceivably be used for roosting and nesting by this species; in particular, the banks of the site's tailwater basin and PID irrigation canal. Burrowing owls have been documented in the near vicinity of the project site; in 1993, active nest burrows were observed in the grassland habitat of the Dickey Tract of the Pixley National Wildlife Refuge, approximately 0.3 and 0.6 mile southwest of the site.

The project will not result in significant loss of habitat for the burrowing owl because the site's habitats are marginally suitable, at best, for this species under existing conditions, and similar or higher quality habitat is regionally abundant. Moreover, the project will convert approximately 160 acres of orchard habitat generally unsuitable for the burrowing owl to a groundwater recharge basin of modest suitability. The basin, when dry, could be used for foraging by this species, and its banks could possibly be used for nesting or roosting.

The applicant will implement the following measures adapted from the Staff Report on Burrowing Owl Mitigation (CDFG 2012).

Mitigation Measure BIO-3a: A take avoidance survey for burrowing owls will be conducted by a qualified biologist between 14 and 30 days prior to the start of construction. This take avoidance survey will be conducted according to methods described in the Staff Report on Burrowing Owl Mitigation (CDFG 2012). The survey area will include all potential roosting and nesting habitat on and within 200 meters of project impact areas, where accessible.

Mitigation Measure BIO-3b: If project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are identified within or near project impact areas, a 200-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.

Mitigation Measure BIO-3c: During the non-breeding season (September 1-January 31), resident owls occupying burrows in project impact areas may either be avoided, or passively relocated to alternative habitat. If the applicant chooses to avoid active owl burrows within the impact area during the non-breeding season, a 50-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing, and will remain in place until a qualified biologist determines that the burrows are no longer active. If the applicant chooses to passively relocate owls during the non-breeding season, this activity will be conducted in accordance with a relocation plan prepared by a qualified biologist.

Implementation of the above measures will reduce potential project impacts to the burrowing owl to a less than significant level under CEQA and ensure compliance with state laws protecting this species.

American Badger

The American badger is a burrowing member of the mink family that resides in grasslands, savannahs and prairies throughout much of the western United States. Badgers prey primarily on small mammals including ground squirrels, pocket gophers, and mice, which they capture by digging out the animals' burrows. Adult badgers are primarily nocturnal, foraging at night and remaining underground in sleeping dens during the day. Badgers may reuse sleeping dens, or dig a new sleeping den each day. Badgers mate in late summer to early fall, and the young are born in natal dens in March and April. Both sleeping dens and natal dens are dug in dry, friable soils with sparse overstory cover. While badgers rarely remain in a sleeping den for more than a day, natal dens may be used for a period of 4-8 weeks as the female gives birth to and raises her young.

The project site is generally unsuitable for badgers, dominated as it is by intensively maintained orchards. However, badgers may occasionally pass through or forage on the site, and the site's ruderal areas could conceivably be used for denning. Deer Creek, which adjoins the site to the south, may represent a movement corridor for any badgers occurring in the project vicinity. Deer Creek interconnects several large blocks of natural land, including the Pixley National Wildlife Refuge's Big Deer Creek Unit and Dickey Tract. The Dickey Tract is located just 0.3 mile west of the project site.

The CNDDDB lists two badger occurrences within a 10-mile radius of the site. The closest of these appears to be historical in nature; on an unknown date, six badgers were "collected" in the general vicinity of Earlimart, approximately 2 miles southeast of the site. More recently, in 2016, a road-killed badger was found on SR 43, approximately 6 miles southwest of the site. Lands surrounding the roadkill location were agricultural, including both dry-farmed and irrigated fields. Although badgers are fairly uncommon in the region, it is possible that individuals of this species occasionally pass through, forage, and/or den on the site.

The project will not result in significant loss of habitat for the American badger because the site's habitats are marginally suitable, at best, for this species under existing conditions, and similar or higher quality habitat is regionally abundant. Moreover, the project will convert approximately 160 acres of orchard habitat generally unsuitable for badgers to a groundwater recharge basin of modest suitability. The basin, when dry, could be used for foraging by this species, and its banks could possibly be used for denning from time to time.

The following measures will be implemented to avoid and minimize the potential for project-related mortality of American badgers.

Mitigation Measure BIO-4a: A preconstruction survey for American badgers will be conducted by a qualified biologist within 30 days of the start of construction. Preconstruction surveys will be conducted in all potential denning habitat on the project site.

Mitigation Measure BIO-4b: Should an active natal den be identified during the preconstruction surveys, a suitable disturbance-free buffer will be established around the den and maintained until a qualified biologist has determined that the cubs have dispersed or the den has been abandoned.

Implementation of the above measures will reduce potential project impacts to the American badger to a less than significant level under CEQA.

Nesting Raptors and Migratory Birds, including Swainson's Hawk, White-tailed Kite, and Loggerhead Shrike

Much of the project site consists of habitat that could be used for nesting by one or more avian species protected under the California Fish and Game Code. Orchard trees could be used for nesting by American robins or mourning doves. Residential structures could be used by house finches or black phoebes. Killdeer may nest on the ground in even the most disturbed areas of the site. The mature riparian trees along Deer Creek, which borders the project site to the south, could be used for nesting by a number of avian species, possibly including the special-status Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), and loggerhead shrike (*Lanius ludovicianus*). Raptors and migratory birds nesting within the project site at the time of construction have the potential to be injured or killed by project activities. In addition to direct "take" of nesting birds, project activities could disturb birds nesting within or adjacent to work areas such that they would abandon their nests. Project activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitute a violation of state laws and are considered a potentially significant impact under CEQA.

The project will not result in loss of habitat for the Swainson's hawk, white-tailed kite, or loggerhead shrike because no habitat for these species is present on the site. The riparian trees adjacent to the site within which these birds could nest will not be impacted by the project. The following measures will be implemented for the protection of nesting raptors and migratory birds including the Swainson's hawk, white-tailed kite, and loggerhead shrike.

Mitigation Measure BIO-5a: In order to avoid impacts to nesting raptors and migratory birds, the project will be constructed, if feasible, outside the nesting season, or between September 1st and January 31st.

Mitigation Measure BIO-5b: If project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 14 days prior to the start of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet, where accessible, for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to 6 mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.

Mitigation Measure BIO-5c: Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.

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

Roosting Bats, including Pallid Bat and Western Mastiff Bat

The project site's residential structures have the potential to be used for roosting by a variety of native bat species, possibly including the pallid bat (*Antrozous pallidus*) and western mastiff bat (*Eumops perotis californicus*), both California Species of Special Concern. If buildings removed by the project contain maternity colonies, many individual bats could be killed. Such a mortality event would be considered a potentially significant impact of the project under CEQA.

The project will not result in significant loss of roosting habitat for the pallid bat or western mastiff bat because similar residential structures are regionally abundant. The project will not result in loss of foraging habitat for these species because the site is expected to remain suitable for foraging following project implementation. The applicant will implement the following measures to avoid and minimize the potential for project-related mortality of roosting bats, as necessary.

Mitigation Measure BIO-6a: To avoid potential impacts to maternity bat roosts, building demolition should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.

Mitigation Measure BIO-6b: If removal of buildings is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to their removal, a qualified biologist will survey them for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.

Mitigation Measure BIO-6c: If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted under the direction of a qualified biologist.

Mitigation Measure BIO-6d: If a maternity colony is detected during preconstruction surveys, the biologist will identify a suitable disturbance-free buffer around the colony. The buffer will remain in place until the biologist determines that the nursery is no longer active.

Implementation of the above measures will reduce impacts to roosting bats to a less than significant level under CEQA.

- 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?**

No Impact: No riparian or other sensitive habitats occur on the project site, and designated critical habitat is absent from the site and adjacent lands. Although Deer Creek and associated riparian habitat adjoin the project site to the south, the project will fully avoid these areas. There is *no impact*.

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

Extensive ground disturbance associated with construction projects often leaves the soils of construction zones barren of vegetation and, therefore, vulnerable to erosion. Eroded soil is generally carried as sediment in surface runoff to be deposited in natural creek beds, canals, and adjacent wetlands. Runoff is often polluted with grease, oil, pesticide and herbicide residues, and/or heavy metals.

The only waterway found on the project site, the unnamed PID irrigation canal, is highly maintained and appears to only discharge water to agricultural lands, such that downstream water quality would not be significantly impacted by work in or around this canal.

As discussed, Deer Creek adjoins the project site to the south. Under current project design, the southern bank of the recharge basin is less than 50 feet from the Deer Creek channel. Construction of the basin therefore has some potential to result in sedimentation or pollution of the creek, which would be considered a significant impact of the project under CEQA.

The applicant will implement the following measures to prevent sedimentation and pollution of Deer Creek.

Mitigation Measure BIO-7a: Where the project site adjoins Deer Creek, the applicant will define the limits of construction with flagging, fencing, or other easily visible means. No ground-disturbing activities shall take place outside of the defined limits.

Mitigation Measure BIO-7b: Straw wattles or other appropriate erosion controls will be placed between ground-disturbing activities and the Deer Creek channel.

Mitigation Measure BIO-7c: The applicant will arrange for the preparation of a Storm Water Pollution Prevention Plan (SWPPP) that identifies measures to prevent erosion and sedimentation of Deer Creek and measures to prevent contaminants from entering storm water. The SWPPP will be implemented in full during project construction.

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

- 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?**

Less than Significant Impact: The project site does not contain any features that would function as a wildlife movement corridor. However, as discussed, Deer Creek adjoins the site to the south, and likely functions as an important travel route for native wildlife because it represents relatively undisturbed riparian habitat within a matrix of intensive agricultural uses, and because it interconnects several blocks of natural land in the project vicinity. While the project is being constructed, wildlife traveling along the Deer Creek corridor may be disturbed by the passage of vehicles and equipment along the Deer Creek access road, or by ambient construction noise, such that they may alter their movements or temporarily avoid using the corridor. It is assumed that construction will be limited to daylight hours; therefore, any wildlife using the Deer Creek corridor at night would be unaffected. The project will not physically impact Deer Creek or associated riparian habitat; therefore, following project implementation, this movement corridor will reassume its former function and value for native wildlife.

Temporary, indirect disturbance of the Deer Creek wildlife movement corridor during daylight hours only is not considered a significant impact of the project under CEQA. Therefore, the impact is less than significant.

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

No Impact: The proposed project is consistent with the goals and policies of the Tulare County General Plan. The project does not conflict with any local policies or ordinances protecting biological resources and there is *no impact*.

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

No Impact: There are no known Habitat Conservation Plans or Natural Community Conservation Plans in effect within the vicinity of the project. There is *no impact*.

V. CULTURAL RESOURCES

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

Environmental Setting

The history of early settlement in the Tulare County area focused primarily on farming and ranching. European settlement did not occur until the arrival into southern California of land-based expeditions originating from Spanish Mexico starting in the 1760s. European-American settlement of this region began in 1851 with the building of Fort Miller on the San Joaquin River. Unfortunately, hostility grew between American settlers and Native inhabitants, which initially prevented widespread settlement of the area. By the 1860s, such stresses between the two groups were reduced and settlers began to inhabit more regions.

In April, 1852, Tulare County was created, with the county seat initially located at Woodsville. In 1853 the county seat was removed to Fort Visalia, located in the area bounded by Oak, Center, Garden and Bridge streets. In 1872, the Southern Pacific Railroad founded the City of Tulare by beginning construction of the railroad within Tulare County, connecting the San Joaquin Valley with markets in the north and east. During this time, valley residents constructed a series of water conveyance systems (canals, dams, and ditches) across the valley. Ample water supplies and assured rail transport were very important for the new colonies making their living off of fruit, grain and dairy farming.

The town of Pixley began as a real-estate-speculation in 1884. The investors, Darwin C. Allen, and William B. Bradbury, knew the town would have potential if it connected to the mainline of the Southern Pacific. A few years later, Frank Pixley joined with the original investors as a partner in the Pixley Townsite Company. The company continued to purchase land in surrounding areas, and when The Southern Pacific extended its tracks to the Townsite, the town prospered.

A Cultural Resources Records Search was conducted by the Southern San Joaquin Valley Information Center on May 14, 2018. The records search stated that there have been no previous cultural resource studies conducted within the project area, however seven studies were conducted within a one-half mile radius of the project. identified three recorded cultural resources within a one-half mile radius of the project area. According to the records search, there are no recorded cultural resources within the project area, however there are three recorded cultural resources within a one-half mile radius of the project site. These resources consist of two historic era earthen canals and one historic era railroad. Additionally, there is a historic era bridge in the one-half mile radius that is known but unrecorded. The full findings of the cultural records search can be found in Appendix C.

Regulatory Setting

National Historic Preservation Act: The National Historic Preservation Act was adopted in 1966 to preserve historic and archeological sites in the United States. The Act created the National Register of Historic Places, the list of National Historic Landmarks, and the State Historic Preservation offices.

California Historic Register: The California Historic Register was developed as a program to identify, evaluate, register, and protect Historical Resources in California. California Historical Landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, experimental, or other value. In order for a resource to be designated as a historical landmark, it must meet the following criteria:

- The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).
- Associated with an individual or group having a profound influence on the history of California.
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.

Tulare County General Plan: The Environmental Resource Management element of the Tulare County General Plan includes the following Goal and Policies pertaining to cultural and historic resources:

Goal ERM-6: To manage and protect sites of cultural and archaeological importance for the benefit of present and future generations.

- *Policy ERM-6.1.* The County shall participate in and support efforts to identify its significant cultural and archaeological resources using appropriate State and Federal standards.

- *Policy ERM-6.2.* The County shall protect cultural and archaeological sites with demonstrated potential for placement on the National Register of Historic Places and/or inclusion in the California State Office of Historic Preservation's California Points of Interest and California Inventory of Historic Resources. Such sites may be of Statewide or local significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, or other values as determined by a qualified archaeological professional.
- *Policy ERM-6.3.* When planning any development or alteration of a site with identified cultural or archaeological resources, consideration should be given to ways of protecting the resources. Development can be permitted in these areas only after a site specific investigation has been conducted pursuant to CEQA to define the extent and value of resource, and mitigation measures proposed for any impacts the development may have on the resource.
- *Policy ERM-6.4.* If preservation of cultural resources is not feasible, every effort shall be made to mitigate impacts, including relocation of structures, adaptive reuse, preservation of facades, and thorough documentation and archival of records.
- *Policy ERM-6.5.* The County should support local, State, and national education programs on cultural and archaeological resources.
- *Policy ERM-6.6.* The County shall support public and private efforts to preserve, rehabilitate, and continue the use of historic structures, sites, and parks. Where applicable, preservation efforts shall conform to the current Secretary of the Interior's Standards for the Treatment of Historic Properties and Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.
- *Policy ERM-6.7.* The County should encourage the cooperation of property owners to treat cultural resources as assets rather than liabilities, and encourage public support for the preservation of these resources.
- *Policy ERM-6.8.* The County shall continue to solicit input from the local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance.
- *Policy ERM-6.9.* The County shall, within its power, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.
- *Policy ERM-6.10.* The County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

Discussion

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

Less Than Significant Impact with Mitigation: A records search was conducted on behalf of the Applicant at the Southern San Joaquin Valley Archaeological Information Center (AIC), to determine if historical or archaeological sites had previously been recorded within the

study area, if the project area had been systematically surveyed by archaeologists prior to the initial study, and/or whether the region of the field project was known to contain archaeological sites and to thereby be archaeologically sensitive.

The records search stated that there have been no previous cultural resource studies conducted within the project area, however seven studies were conducted within a one-half mile radius of the project. Identified three recorded cultural resources within a one-half mile radius of the project area. According to the records search, there are no recorded cultural resources within the project area, however there are three recorded cultural resources within a one-half mile radius of the project site. These resources consist of two historic era earthen canals and one historic era railroad. Additionally, there is a historic era bridge in the one-half mile radius that is known but unrecorded. The full findings of the cultural records search can be found in Appendix C,

Based on the results of the records search and historic resources, no previously recorded cultural resources are located within the project site. Although no historical resources were identified, the presence of remains or unanticipated cultural resources under the ground surface is possible. Implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that impacts to this checklist item will be *less than significant with mitigation* incorporation.

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

Less Than Significant Impact with Mitigation: There are no known archaeological resources located within the project area. Implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that potential impact will be *less than significant with mitigation* incorporation.

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

Less Than Significant Impact with Mitigation: There are no known paleontological resources located within the project area. However, implementation of Mitigation Measures CUL-1 and CUL-2 will ensure that any impacts resulting from project implementation remain *less than significant with mitigation* incorporation.

d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact with Mitigation: There are no known human remains buried in the project vicinity. If human remains are unearthed during development, there is a potential for a significant impact. As such, implementation of Mitigation Measure CUL-2 will ensure that impacts remain *less than significant with mitigation* incorporation.

Mitigation Measures for Impacts to Cultural Resources:

Mitigation Measure CUL-1: If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (NPS 1983) should be contacted immediately to evaluate the find. If the discovery proves to be significant under CEQA, additional work such as data recovery excavation and Native American consultation may be warranted to mitigate any adverse effects.

Mitigation Measure CUL-2: The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

VI. GEOLOGY AND SOILS

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

Environmental Setting

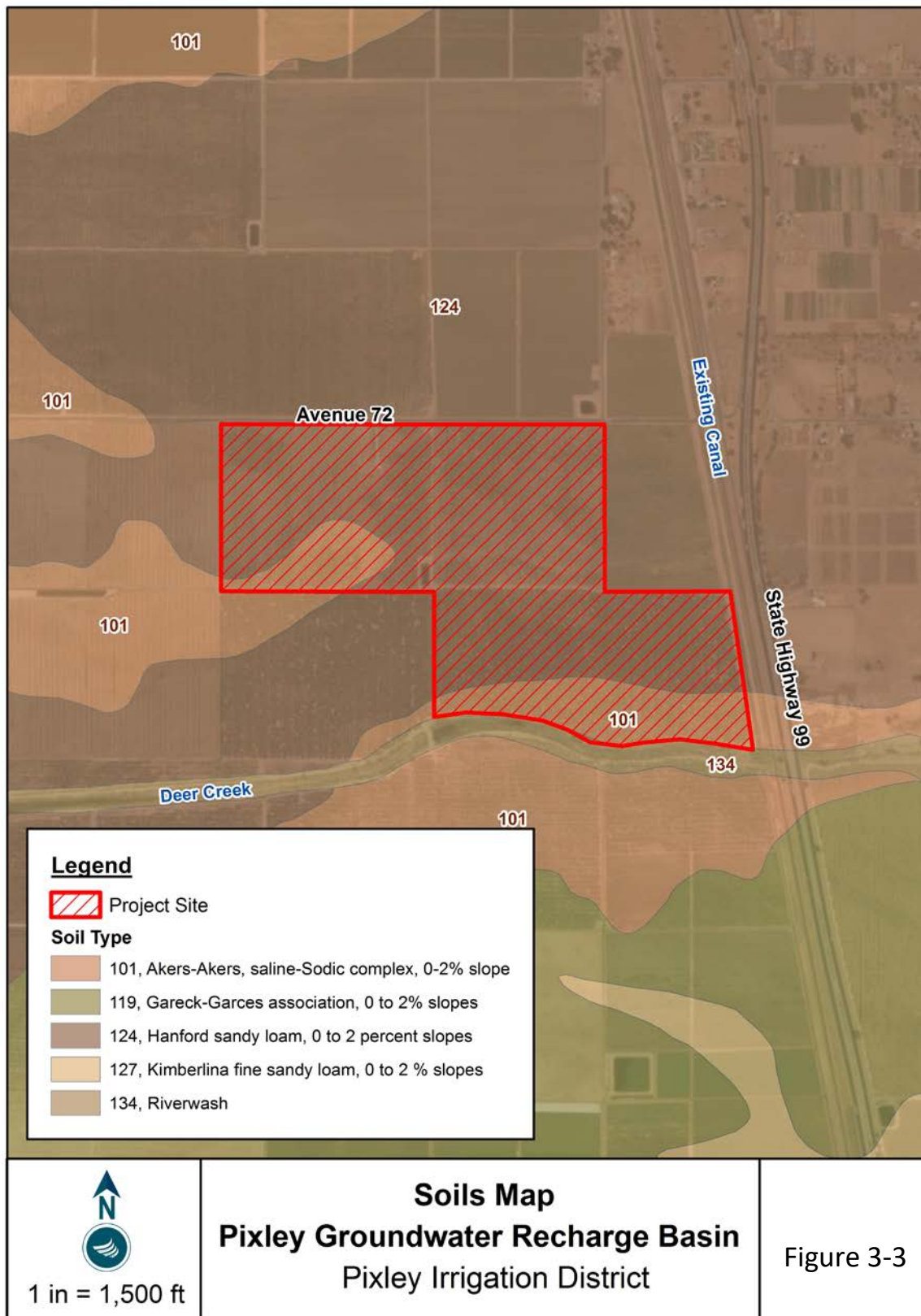
Geologic Stability and Seismic Activity

- Seismicity:** Although there are a number of potentially active faults within and near Tulare County, there are no known active faults in the County. In fact, Tulare County rarely even feels the largest earthquakes from the San Andres Fault, the nearest major fault line. Active seismic areas exists in the southern areas of the County, therefore majority of the County, including the proposed project site, is considered to be at relatively low risk for seismic activity. Section 5 of the 2017 Tulare Multi-Jurisdictional Local Hazard Mitigation Plan identifies the project site as likely to experience low to moderate shaking from earthquakes, and may experience higher levels if an earthquake were to occur in or near the County. Ground shaking can result in other geological impacts, including liquefaction, landslides, lateral spreading, subsidence, or collapse.

- **Liquefaction:** Liquefaction is a phenomenon whereby unconsolidated and/or near-saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in temporary, fluid-like behavior of the soil, which can result in landslides and lateral spreading. No specific countywide assessment of liquefaction has been performed; however the 2017 Tulare Multi-Jurisdictional Local Hazard Mitigation Plan identifies the risk of liquefaction within the county as low because the soil types in the area either too coarse or too high in clay content.
- **Landslides:** Landslides refer to a wide variety of processes that result in the downward and outward movement of soil, rock, and vegetation under gravitational influence. Landslides can be caused by both natural and human-induced changes in slope stability and often accompany other natural hazard events, such as floods, wildfire, or earthquake. Eastern portions of the County are considered to be high landslide hazard areas, the majority of the unincorporated areas of the County, including the proposed project site, are considered to be susceptible to landslides and mudslides. The 2017 Tulare Multi-Jurisdictional Local Hazard Mitigation Plan states that minor landslides will likely continue to impact the area when heavy precipitation occurs, however no major landslides or mudslides have been recorded in the populated areas of the County.
- **Subsidence:** Land Subsidence refers to the vertical sinking of land as a result of either manmade or natural underground voids. Subsidence has occurred throughout the Central Valley at differing rates since the 1920's as a result of groundwater, oil, and gas withdrawal. During drought years, Tulare County is prone to accelerated subsidence, with some areas sinking up to 28 feet. Although western portions of the County show signs of deep and shallow subsidence, the majority of the County, including the proposed project site, is not considered to be at risk of subsidence related hazards.

Soils Involved in Project: The proposed project involves construction on three soil types. The properties of these soils are described briefly below:

- **Akers-Akers, saline-Sodic Complex:** A small portion of the proposed groundwater recharge basin is located on Akers Akers saline-Sodic Complex soil. The Akers series is a member of a coarse loamy, mixed, superactive, thermic Calcic Haploxerepts taxonomic class. The soils have pale brown, moderately alkaline, very deep fine sandy loam horizons, formed in alluvium derived from granitic rock. Akers fine sandy loam soils are well drained with negligible runoff and moderate permeability.
- **Hanford Sandy Loam:** The majority of the proposed groundwater recharge basin would be located on Hanford Sandy Loam soils. The Hanford series is a member of a coarse-loamy mixed, superactive, nonacid thermic Typic Xerothents taxonomic class. The soils have light brown, very deep, fine sandy loam, formed in moderately coarse textured alluvium predominately from granite. These soils can be found on stream bottoms, alluvial fans and floodplains. Hanford Sandy Loam soils are very deep, well drained soils with negligible to low runoff and moderately rapid permeability.



Regulatory Setting

California Building Code: The California Building Code contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. CBC provisions provide minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all buildings and structures and certain equipment.

Tulare County General Plan: The Health and Safety Element of the Tulare County General Plan includes the following goals and policies regarding soils and geology.

- **HS-1.11 Site Investigations:** The County shall conduct site investigations in areas planned for new development to determine susceptibility to landslides, subsidence/settlement, contamination, and/or flooding.
- **HS-2.1 Continued Evaluation of Earthquake Risks:** The County shall continue to evaluate areas to determine levels of earthquake risk.

Discussion

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

Less Than Significant Impact: According to the Tulare County Multi-Hazard Mitigation Plan, no active faults underlay the project site. Although the project is located in an area of relatively low seismic activity, the project could be affected by ground shaking from nearby faults. The potential for strong seismic ground shaking on the project site is not a significant environmental concern due to the infrequent seismic activity of the area and distance to the faults. Furthermore, the proposed project would not expose people to seismic ground shaking beyond the conditions that currently exist throughout the project area. The project would be constructed to the standards of the most recent seismic Uniform Building and Safety Code (UBSC). Compliance with all applicable design standards will ensure potential impacts related to strong seismic ground shaking would be *less than significant*.

iii. **Seismic-related ground failure, including liquefaction?**

Less Than Significant Impact: No specific countywide assessment of liquefaction has been performed, however the Tulare County Multi-Hazard Mitigation Plan identifies the risk of liquefaction within the county as low because the soil types are unsuitable for liquefaction. The area's low potential for seismic activity would further reduce the likelihood of liquefaction occurrence. Because the project site is within an area of low seismic activity, and the soils associated with the project are not suitable for liquefaction, impacts related to liquefaction are considered *less than significant*.

iv. **Landslides?**

Less than Significant Impact: Although the majority of Tulare County is considered at moderate risk of small landslides, project site is generally flat and there are no hill slopes in the area. As a result, there is almost no potential for landslides. No geologic landforms exist on or near the site that would result in a landslide event. The impact is *less than significant*.

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

Less Than Significant Impact: A large amount of soil will be removed from the project site as part of groundwater recharge basin construction and installation of the proposed mainline pipe. Although these construction activities will result in a loss of topsoil, any soil erosion impacts would be temporary and subject to best management practices required by SWPPP. These best management practices are developed to prevent significant impacts related to erosion from construction. Because impacts related to erosion would be temporary and limited to construction and required best management practices would prevent significant impacts related to erosion, the impact will remain *less than significant*.

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

Less Than Significant Impact: The soils associated with the project site are considered stable and have a low capacity for landslides, lateral spreading, subsidence, liquefaction or collapse. Because the project area is considered to be stable, and this project would not result in a substantial grade change to the topography to the point that it would increase the risk of landslides, lateral spreading, subsidence, liquefaction or collapse the impact is considered *less than significant*.

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

No Impact: The proposed project site is not in an area identified by the Tulare County Multi-Hazard Mitigation Plan as having expansive soils. Because the soils associated with the project do not exhibit shrink swell behavior, implementation of the project will pose no risk to life or property caused by expansive soils and there is *no impact*.

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

No Impact: Wastewater will not be generated as a result of project implementation and no septic tanks or alternative wastewater disposal systems are proposed. There is *no impact*.

VII. GREENHOUSE GAS EMISSIONS

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

Environmental Setting

Natural processes and human activities emit greenhouse gases. The presence of GHGs in the atmosphere affects the earth's temperature. Without the natural heat-trapping effect of GHGs, the earth's surface would be about 34°C cooler. However, it is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

The effect of greenhouse gasses on earth's temperature is equivalent to the way a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide, methane, nitrous oxide, ozone, chlorofluorocarbons, hydro chlorofluorocarbons, and hydro fluorocarbons, per fluorocarbons, sulfur and hexafluoride. Some gases are more effective than others. The Global Warming Potential (GWP) has been calculated for each greenhouse gas to reflect how long it remains in the atmosphere, on average, and how strongly it absorbs energy. Gases with a higher GWP absorb more energy, per pound, than gases with a lower GWP, and thus contribute more to global warming. For example, one pound of methane is equivalent to twenty-one pounds of carbon dioxide.

GHGs as defined by AB 32 include the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHGs as defined by AB 32 are summarized in Table 5. Each gas's effect on climate change depends on three main factors. The first being the quantity of these gases are in the atmosphere, followed by how long they stay in the atmosphere and finally how strongly they impact global temperatures.

Greenhouse Gas	Description and Physical Properties	Lifetime	GWP	Sources
Methane (CH ₄)	Is a flammable gas and is the main component of natural gas	12 years	21	Emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
Carbon dioxide (CO ₂)	An odorless, colorless, natural greenhouse gas.	30-95 years	1	Enters the atmosphere through burning fossil fuels (coal, natural gas and oil), solid waste, trees and wood products, and also as a result of certain chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.
Chloro-fluorocarbons	Gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are non-toxic nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	55-140 years	3,800 to 8,100	Were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone.
Hydro-fluorocarbons	A man-made greenhouse gas. It was developed to replace ozone-depleting gases found in a variety of appliances. Composed of a group of greenhouse gases containing carbon, chlorine and at least one hydrogen atom.	14 years	140 to 11,700	Powerful greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for stratospheric ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases.
Nitrous oxide (N ₂ O)	Commonly known as laughing gas, is a chemical compound with the formula N ₂ O. It is an oxide of nitrogen. At room temperature, it is a colorless, non-flammable gas, with a slightly sweet odor and taste. It is used in surgery and dentistry for its anesthetic and analgesic effects.	120 years	310	Emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

Greenhouse Gas	Description and Physical Properties	Lifetime	GWP	Sources
Pre-fluorocarbons	Has a stable molecular structure and only breaks down by ultraviolet rays about 60 kilometers above Earth's surface.	50,000 years	6,500 to 9,200	Two main sources of pre-fluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	An inorganic, odorless, colorless, and nontoxic nonflammable gas.	3,200 years	23,900	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing and as a tracer gas.

Table 3-5. Greenhouse Gasses; Source: EPA, Intergovernmental Panel on Climate Change

In regards to the quantity of these gases are in the atmosphere, we first must establish the amount of particular gas in the air, known as Concentration, or abundance, which are measured in parts per million, parts per billion and even parts per trillion. To put these measurement in more relatable terms, one part per million is equivalent to one drop of water diluted into about 13 gallons of water, roughly a full tank of gas in a compact car. Therefore, it can be assumed larger emission of greenhouse gases lead to a higher concentration in the atmosphere.

Each of the designated gases described above can reside in the atmosphere for different amounts of time, ranging from a few years to thousands of years. All of these gases remain in the atmosphere long enough to become well mixed, meaning that the amount that is measured in the atmosphere is roughly the same all over the world regardless of the source of the emission.

Regulatory Setting

AB 32: AB 32 set the 2020 greenhouse gas emissions reduction goal into law. It directed the California Air Resources Board to begin developing discrete early actions to reduce greenhouse gases while also preparing a scoping plan to identify how best to reach the 2020 limit. The reduction measures to meet the 2020 target are to be adopted by the start of 2011.

SB 1078, SB 107 and Executive Order S-14-08: SB 1078, SB 107, and Executive Order S-14-08 require California to generate 20% of its electricity from renewable energy by 2017. SB 107 then changes the 2017 deadline to 2010. Executive Order S-14-08 required that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020.

Discussion

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

Less Than Significant Impact: Greenhouse gas emissions for the construction and operation of the proposed groundwater retention basin, duel diversion structure, and mainline pipe were modeled using the California Emissions Estimator Model (CalEEMod). The full CalEEMod report can be found in Appendix A.

Construction: Greenhouse gas emissions, generated during construction, would include activities such as site preparation, grading to create the proposed groundwater recharge basin and canal, and construction of proposed outlet structure. The CalEEMod Emissions report predicts that this project will create a maximum of 1,184.903 MT of CO₂e emissions per year during construction. Because the SJVAPCD does not have numeric thresholds for assessing the significance of construction-related GHG emissions, predicted emissions from project construction were compared to SCAQMD thresholds for construction related GHG emissions. The SCAQMD currently has a threshold of 10,000 metric tons of CO₂e per year for construction emissions amortized over a 30-year project lifetime. Because project construction would generate far less GHG emissions than this threshold, impacts related to GHG emissions during project construction would be less than significant.

Operation: Operational greenhouse gas emissions will be generated primarily from maintenance activities. Maintenance of the proposed groundwater recharge basin, diversion structure, and mainline pipe is anticipated to incite approximately 3 worker trips per week. The CalEEMod Emissions report predicts that the project will create a maximum of 0.00306 MT of CO₂e per year during operations.

Because the GHG emissions related to construction are below accepted thresholds of significance, and the project would generate very little GHG emissions while under operation, the impact is *less than significant*.

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

No Impact: The proposed project will comply with all Federal, State, and Local rules pertaining to the regulation of greenhouse gas emissions. In addition, the project will implement Best Performance Standards developed by the SJVAPCD. Projects implementing Best Performance Standards are determined to have a less than significant impact on global climate change. The project will not conflict with any plan, policy, or regulation developed to reduce GHG emissions. There is *no impact*.

VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to 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?	☐	☐	☐	☒

Environmental Setting

The proposed project site is located approximately 2.2 miles from the nearest school, 16.5 miles from the nearest airport, and 10 miles from the nearest private airstrip. Earlimart Middle School and the San Joaquin Sprayers Incorporated Heliport are located southeast of the project site. The Mefford Field Airport is located 16.5 miles north of the project's location. The Department of Toxic Substances Control's (DTSC's) Envirostor was used to identify any sites known to be associated with releases of hazardous materials or wastes within the project area. This research confirmed that the project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.



Regulatory Setting

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S. Code [U.S.C.] §9601 et seq.). The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or the Superfund Act) authorizes the President to respond to releases or threatened releases of hazardous substances into the environment.

Occupational Safety and Health Administration. The Occupational Safety and Health Administration (OSHA) sets and enforces Occupational Safety and Health Standards to assure safe working conditions. OSHA provides training, outreach, education, and compliance assistance to promote safe workplaces. The proposed Project would be subject to OSHA requirements during construction, operation, and maintenance.

Toxic Substances Control Act of 1976 (15 U.S.C. §2601 et seq.). The Toxic Substance Control Act was enacted by Congress in 1976 and authorizes the EPA to regulate any chemical substances determined to cause an unreasonable risk to public health or the environment.

Hazardous Waste Control Law, Title 26. The Hazardous Waste Control Law creates hazardous waste management program requirements. The law is implemented by regulations contained in Title 26 of the California Code of Regulations (CCR), which contains requirements for the following aspects of hazardous waste management:

- Identification and classification;
- Generation and transportation;
- Design and permitting of recycling, treatment, storage, and disposal facilities;
- Treatment standards;
- Operation of facilities and staff training; and
- Closure of facilities and liability requirements.

California Code of Regulations, Title 22, Chapter 11. Title 22 of the California Code of Regulations contains regulations for the identification and classification of hazardous wastes. The CCR defines a waste as hazardous if it has any of the following characteristics: ignitability, corrosivity, reactivity, and/or toxicity.

California Emergency Services Act. The California Emergency Services Act created a multi-agency emergency response plan for the state of California. The Act coordinates various agencies, including CalEPA, Caltrans, the California Highway Patrol, regional water quality control boards, air quality management districts, and county disaster response offices.

Hazardous Materials Release Response Plans and Inventory Law of 1985.

Pursuant to the Hazardous Materials Release Response Plans and Inventory Law of 1985, local agencies are required to develop “area plans” for response to releases of hazardous materials and wastes. Tulare County maintains a Hazardous Material

Figure 3-4

Incident Response Plan to coordinate emergency response agencies for incidents and requires the submittal of business plans by persons who handle hazardous materials.

Tulare County General Plan: The Health and Safety Element of the Tulare County General Plan includes the following policies pertaining to hazards and hazardous materials:

Goal HS-1: To protect residents, visitors, and property from hazardous materials through their safe use, storage, transport, and disposal.

- Policy HS-1.4: The County shall strive to ensure hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards, including the Hazardous Waste Management Plan, Emergency Operations Plan, and Area Plan
- Policy HS-1.5: The County shall continue to promote awareness and education among residents regarding possible natural hazards, including soil conditions, earthquakes, flooding, fire hazards, and emergency procedures
- Policy HS-1.6: The County shall promote public safety programs, including neighborhood watch programs, child identification and fingerprinting, public awareness and prevention of fire hazards, and other public education efforts

Goal HS-4: To protect residents, visitors, and property from hazardous materials through their safe use, storage, transport, and disposal.

- Policy HS-4.1: The County shall strive to ensure hazardous materials are used, stored, transported, and disposed of in a safe manner, in compliance with local, State, and Federal safety standards, including the Hazardous Waste Management Plan, Emergency Operations Plan, and Area Plan
- Policy HS-4.5: The County shall review new development proposals to protect soils, air quality, surface water, and groundwater from hazardous materials contamination
- Policy HS-4.8: The County shall ensure that the proponents of new development projects address hazardous materials concerns through the preparation of Phase I or Phase II hazardous materials studies for each identified site as part of the design phase for each project. Recommendations required to satisfy federal or State cleanup standards outlined in the studies will be implemented as part of the construction phase for each project

Goal HS-7: To provide effective emergency response to natural or human-made hazards and disasters.

- Policy HS-7.8: The County incorporates the adopted Tulare County Multi-Jurisdiction Hazard Mitigation Plan into the Tulare County General Plan Health and Safety Element. The plan provides guidance and insight into the hazards that exist in Tulare County and

suggests possible mitigation projects. The plan should be consulted when addressing known hazards to ensure the general health and safety of Tulare County residents

Goal HS-E: To minimize the exposure of the public to high noise levels and safety hazards through land use controls and policies for property in the vicinity of airports; and to limit urban encroachment around airports in order to preserve the safety of flight operations and the continued viability of airport facilities.

- Policy HS-E.2 The County shall ensure that new development, including public infrastructure projects, does not create safety hazards such as glare from direct or reflective sources, smoke, electrical interference, hazardous chemicals, or fuel storage in violation of adopted safety standards

Goal HS-F To minimize the risk of loss of life, injury, serious illness, and damage to property resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.

- Policy HS-F.6 The County shall work cooperatively with the State Department of Toxic Substances Control and Regional Water Quality Control Board to promote the timely and efficient cleanup of contaminated sites under the regulatory oversight of these agencies

Discussion

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

Less than Significant Impact: Project construction activities may involve the use, storage, and transport of hazardous materials. During construction, the contractor will use fuel trucks to refuel onsite equipment, and may use paints and solvents to a limited degree. The storage, transport, and use of these materials will comply with Local, State, and Federal regulatory requirements. There is the potential for small leaks due to refueling of construction equipment, however standard construction Best Management Practices (BMPs) included in the SWPPP will reduce the potential for the release of construction related fuels and other hazardous materials by controlling runoff from the site, and requiring proper disposal or recycling of hazardous materials. The impact is *less than significant*.

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

No Impact: The proposed project is not anticipated to create a significant hazard to the public or the public as the proposed project would not routinely transport, use, dispose, or discharge hazardous materials into the environment. Therefore, there would be no impact.

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

No Impact: The project is not located within ¼ mile of an existing or proposed school, and there is no reasonably foreseeable condition or incident involving the emission, handling, or disposal of hazardous materials, substances, or waste that would affect areas within ¼ miles of existing or proposed school sites. There is *no impact*.

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

No Impact: The project site is not listed as a hazardous materials site pursuant to Government Code Section 65962.5 and is not included on a list compiled by the Department of Toxic Substances Control. The nearest hazardous materials site is Harmon Field, site identification number 54070051, approximately 3.3 miles south-west of the proposed project site. The Harmon Field site is listed as active as of May 1, 1985 due to past airfield operations that caused contamination. There would be *no impact*.

- 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?**

No Impact: The proposed project is located approximately 16.5 miles away from the nearest public airport (Mefford Field Airport) and is not located in an airport land use plan. Implementation of the proposed project would not result in a safety hazard for people residing or working in the project area. There is 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?**

No Impact: San Joaquin Sprayers Incorporated Heliport is the nearest private airstrip and is located approximately 10 miles south-east of the project site. Implementation of the proposed project would not result in a safety hazard for people residing or working in the project area. There is *no impact*.

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

No Impact: The County's design and environmental review procedures shall ensure compliance with emergency response and evacuation plans. Therefore, the proposed project would have *no impact* on emergency evacuation.

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

No Impact: The land surrounding the project site is designated for agricultural land use and is not considered to be wildland. Additionally, the proposed project site is not in a wildfire threat area as identified by the 2017 Tulare Multi-Jurisdictional Local Hazard Mitigation Plan. The surrounding properties are all under agricultural production and the area is routinely maintained for weed control. Installation and maintenance of the project would result in a reduction of brush at the project site and would therefore reduce the threat of wildfire in the area. For these reasons, the proposed project would have no impact to wildland fires.

IX. HYDROLOGY AND WATER QUALITY

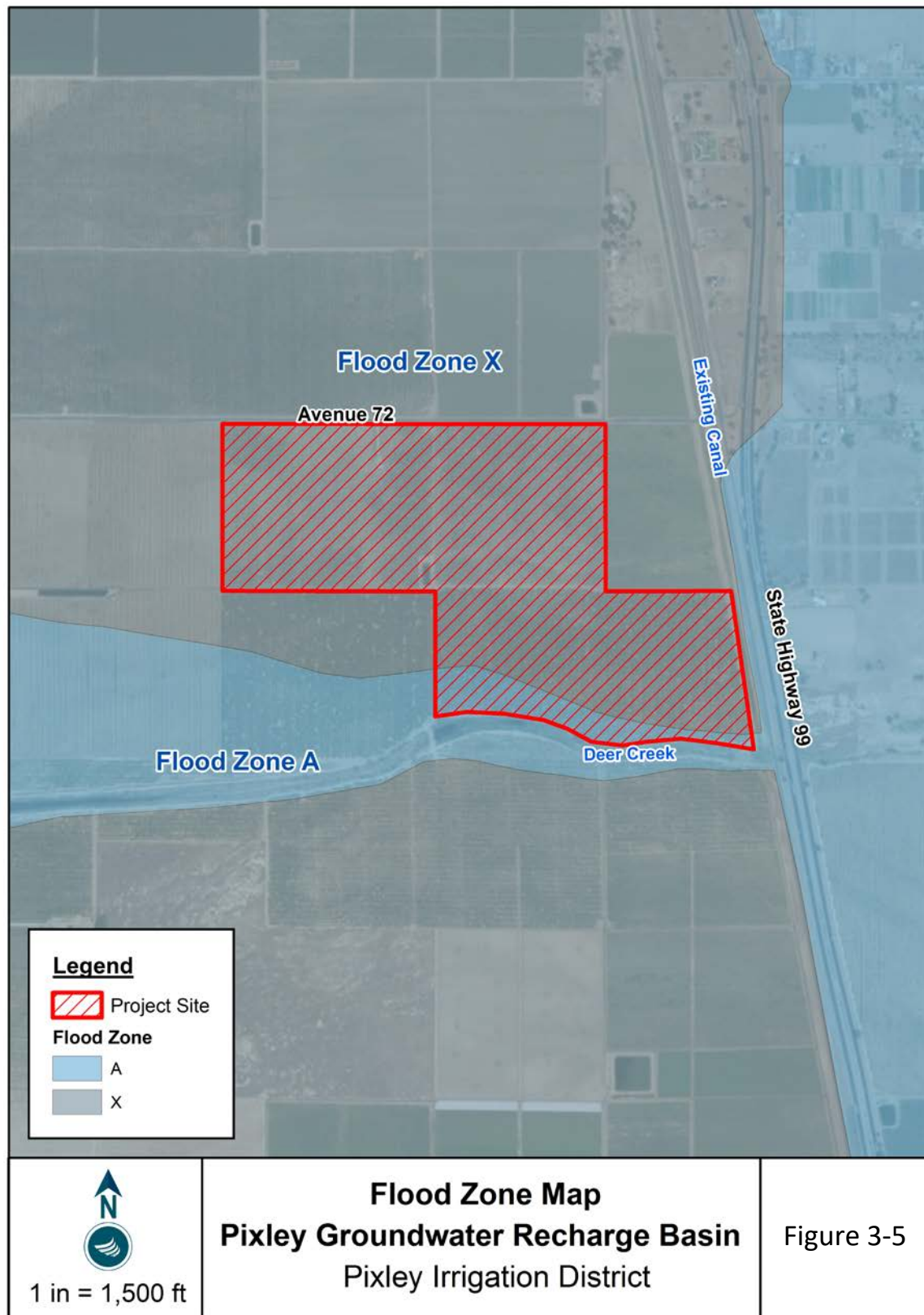
Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater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

Environmental Setting

Hydrologic System: The proposed project site is located in the Tulare Lake Hydrologic Region, which covers 10.9 million acres south of the San Joaquin River. The Tulare Lake Hydrologic Region is composed of 12 groundwater basins. The proposed project site lies within the San Joaquin Valley Groundwater Basin. The San Joaquin Valley Groundwater Basin is divided into seven sub-basins. The proposed project site is located within the Tule Sub-basin.

Groundwater: Pixley Irrigation District receives groundwater supplies from the Tule Sub-basin. The basin is composed of two extensive and usable groundwater aquifers. The upper aquifer is unconfined and highly receptive to recharge from locations throughout the District extending east into the foothills of the Sierra Nevada Mountains. The lower aquifer is confined under the Corcoran Clay layer and can be effectively recharged from areas east of Highway 99.

Surface Waters: Pixley Irrigation District is within the Upper Deer-Upper White Watershed. The District has a maximum annual entitlement of 31,102 AF/Year with the U.S. Bureau of Reclamation via the Friant Division of the Central Valley Project. When Friant Division Water is available, the District intends to purchase this water and divert into these basins for recharge, and would be the source of water for recharge in this facility.



Regulatory Setting

Central Valley RWQCB: The proposed project site is within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). The Central Valley RWQCB requires a National Pollution Discharge Elimination System (NPDES) Permit and Stormwater Pollution Prevention Plan (SWPPP) for projects disturbing more than one acre of total land area. Because the project is greater than one acre, a NPDES Permit and SWPPP will be required.

Tulare County General Plan: The Tulare County General Plan identifies the following hydrologic resource goals and policies that are potentially applicable to the proposed project:

- PFS-2.1 Water Supply: The County shall work with agencies providing water service to ensure that there is an adequate quantity and quality of water for all uses, including water for fire protection, by, at a minimum, requiring a demonstration by the agency providing water service of sufficient and reliable water supplies and water management measures for proposed urban development
- PFS-4.5 Detention/Retention Basins Design: The County shall require that stormwater detention/retention basins be visually unobtrusive and provide a secondary use, such as recreation, when feasible
- HS-5.4 Multi-Purpose Flood Control Measures: The County shall encourage multipurpose flood control projects that incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of the County's streams, creeks, and lakes. Where appropriate, the County shall also encourage the use of flood and/or stormwater retention facilities for use as groundwater recharge facilities.
- WR-1.8 Groundwater Basin Management: The County shall take an active role in cooperating in the management of the County's groundwater resources.
- WR-2.4 Construction Site Sediment Control: The County shall continue to enforce provisions to control erosion and sediment from construction sites
- WR-3.1 Develop Additional Water Sources: The County shall encourage, support and, as warranted, require the identification and development of additional water sources through the expansion of water storage reservoirs, development of groundwater banking for recharge and infiltration, and promotion of water conservation programs, and support of other projects and programs that intend to increase the water resources available to the County and reduce the individual demands of urban and agricultural users.
- WR-3.6 Water Use Efficiency: The County shall support educational programs targeted at reducing water consumption and enhancing groundwater recharge.

- WR-3.10 Diversion of Surface Water: Diversions of surface water or runoff from precipitation should be prevented where such
- diversions may cause a reduction in water available for groundwater recharge.

Discussion

a) Would the project violate any water quality standards or waste discharge requirements?

No Impact: This project will not generate any wastewater or violate any water quality standards. Implementation of a Stormwater Pollution Prevention Plan (SWPPP) will be required for the project. A SWPPP identifies all potential sources of pollution that could affect stormwater discharges from the project site and identifies best management practices (BMPs) related to stormwater runoff. Additionally, no chemicals or surfactants will be used during project maintenance or operations, so there will be no discharge that could impact water quality standards. The project will not violate any water quality standards or waste discharge requirements and there is *no impact*.

b) Would the project 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 preexisting nearby wells would drop to a level which would not support existing land use or planned uses for which permits have been granted)?

No Impact: The purpose of the proposed project is to increase the potential for groundwater recharge within the basin by diverting excess surface waters from the Friant Division of the Central Valley Project for groundwater recharge during years when excess Friant water is available. The proposed project includes the construction of a groundwater recharge basin, totaling approximately 130 acres, an outlet, and a 0.2 mile canal to divert floodwaters for groundwater recharge. Any surface water to be diverted to the recharge basin during operations will include imported surface water, either through purchase, contract, or transfer. Implementation of the proposed project will improve groundwater recharge and result in a net increase in groundwater supplies. The project will not deplete groundwater supplies or result in a net decrease in groundwater supplies. There is *no impact*.

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

Less Than Significant Impact: The proposed outlet and canal would direct floodwaters from an existing canal into the proposed groundwater recharge basin. This would be considered an alteration in drainage pattern, however this would not result in substantial erosion or siltation on- or off-site. Water that is diverted into the basin will remain in the basins for groundwater recharge and no runoff out of the basins will occur. A Stormwater Pollution

Prevention Plan (SWPPP) will be implemented during project construction. SWPPPs include mandated erosion control measures, which are developed to prevent significant impacts related to erosion caused by runoff during construction. The impact is *less than significant*.

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

Less Than Significant Impact: The proposed outlet and canal would direct floodwaters from an existing canal into the proposed groundwater recharge basin. This would be considered an alteration in drainage pattern, however this would not result in substantial surface runoff or contribute to flooding on- or off-site. Diverting water into the proposed recharge basin during flood events will reduce impacts related to flooding on properties downstream from the project site. There is the potential for runoff to occur during project construction, however implementation of required SWPPP BMPs will reduce any impacts related to stormwater runoff, including flooding, to less than significant levels. The project will have a *less than significant impact* on flooding on or off site.

- e) Would the project 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?**

No Impact: The proposed project will not create or contribute runoff water and there would be no impacts to existing or planned stormwater drainage systems. All stormwater will remain on-site, as the basins will be constructed to retain water for groundwater recharge. Additionally, implementation of SWPPP BMPs will further reduce the potential for stormwater-related impacts to occur. No chemicals or surfactants will be used during project maintenance or operations, so there will be no ongoing discharge that could impact water quality. There is *no impact*.

- f) Would the project otherwise substantially degrade water quality?**

No Impact: The project is not a source which would otherwise create substantial degradation of water quality. No wastewater will be generated as a result of the project and all stormwater will be managed using SWPPP BMPs. There is no impact.

- g) Would the project 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?**

No Impact: This project does not propose any residential housing. There is no impact.

h) Would the project place within a 100-year flood hazard area structures, which would impede or redirect flood flows?

No Impact: The project proposes to construct an approximately 160-acre groundwater recharge basin, outlet, and 0.2 mile pipeline to divert water from an existing canal for groundwater recharge. Diverting water into the proposed recharge basin during flood events will reduce impacts related to flooding on properties downstream from the project site. The project is supported by Tulare County General Plan policies related to flood management. There is *no impact*.

i) Would the project 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?

No Impact: The Tulare County Multi-Jurisdictional Local Hazard Mitigation Plan identifies the site as being within a dam failure inundation area, however the project would not expose people or structures to increased risk of loss, injury or death involving flooding. The project proposes no residential housing and there will be no permanent onsite employees associated with the project. In addition, the diversion of water into the groundwater recharge basin during flood events would reduce flood-related impacts downstream. There is *no impact*.

j) Inundation by seiche, tsunami, or mudflow?

No Impact: The proposed project is located inland and not near an ocean or large body of water, therefore, would not be affected by a tsunami. The proposed project is located in a relatively flat area and would not be impacted by inundation related to mudflow. Therefore, the proposed project would have *no impacts* related to seiche, tsunami, or mudflow.

X. LAND USE AND PLANNING

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

Environmental Setting

The proposed project site is located in an unincorporated area of Tulare County, approximately 2 miles north-west of the unincorporated community of Earlimart. The site and surrounding properties are within the Valley Agricultural land use planning area and are zoned AE-40.

The proposed basin site is bounded by railroad tracks to the east, Deer Creek to the south, and irrigated agriculture to the north and west. The project site is currently operated as an almond orchard.

Regulatory Setting

Tulare County General Plan: The proposed project site and surrounding properties are within the County's Valley Agricultural land use planning area and are zoned AE-40.

Valley Agriculture (VA): This designation establishes areas for intensive agricultural activities on prime valley agricultural soils and other productive or potentially productive valley lands where commercial agricultural uses can exist without conflicting with other uses, or where conflicts can be mitigated. Uses typically allowed include irrigated crop production, orchards and vineyards; livestock; resource extraction activities and facilities that directly support agricultural operations, such as processing; and other necessary public utility and safety facilities. Allowable residential development includes one principal and one secondary dwelling unit per parcel for relative, caretaker/employee, or farm worker housing. This designation is located primarily outside UDBs on the valley floor. The RVLP generally applies to the central valley below the 600-foot elevation contour line outside the County's UDBs and HDBs (see RVLP Part II page 1-1). The following standards apply to all parcels designated as valley agriculture except those parcels deemed non-viable in accordance with the procedures set forth in Part II-Chapter 1 (RVLP). Maximum density, intensity, and parcel size for non-viable parcels is determined in accordance with the procedures set forth in Part II-Chapter 1 (RVLP).

- Minimum Parcel Size: 10-80 Acres
- Maximum Density: 1 dwelling unit per 10 acres
One additional unit may be allowed for every 20 additional acres over the minimum parcel size
- Maximum Intensity: 0.02 FAR

The following goals and policies in the Tulare County General Plan are applicable to the project site's agricultural land use designation:

- AG-1.17 Agricultural Water Resources: The County shall seek to protect and enhance surface water and groundwater resources critical to agriculture
- LU-2.5 Agricultural Support Facilities: The County shall encourage beneficial reuse of existing or vacant agricultural support facilities for new businesses (including non-agricultural uses)
- HS-5.4 Multi-Purpose Flood Control Measures: The County shall encourage multipurpose flood control projects that incorporate recreation, resource conservation, preservation of natural riparian habitat, and scenic values of the County's streams, creeks, and lakes. Where appropriate, the County shall also encourage the use of flood and/or stormwater retention facilities for use as groundwater recharge facilities.
- WR-1.5 Expand Use of Reclaimed Wastewater: To augment groundwater supplies and to conserve potable water for domestic purposes, the County shall seek opportunities to expand groundwater recharge efforts.

Tulare County Zoning Ordinance: The proposed project site and surrounding properties are zoned as AG-40, General Agricultural-40 District. This district is intended for intensive agricultural uses of land. This area should be reserved for commercial agricultural uses due to its high soil quality. The minimum parcel size in the AG-40 zoning district is 40 acres in size.

Discussion

a) Would the project physically divide an established community?

No Impact: The proposed project will not physically divide an established community. The proposed groundwater recharge basin would be used to supplement groundwater resources which would support agricultural production in the community. The proposed outlet structure and canal would divert flood waters from an existing canal into the proposed groundwater recharge basin. The proposed project would not intrude on public right of way or impede movement of people or animals. There will be *no impacts*.

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

No Impact: The proposed project is supported by the Tulare County General Plan goals and policies. The proposed groundwater recharge basin would be used to supplement groundwater resources which would support agricultural production in the community. The Tulare County General Plan states that agricultural support activities are permitted on lands designated for agricultural use, and that projects to promote groundwater recharge and flood control should be encouraged. The project does not conflict with any land use plans for the area, and there is *no impact*.

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

No Impact: There are no approved local, regional, or state plans related to habitat conservation within the project area. There would be *no impact*.

XI. MINERAL RESOURCES

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally - important mineral resource recovery site delineated on a local general plan, specific plan or other lands use plan?	☐	☐	☐	☒

Environmental Setting

There are no mineral resource zones in Tulare County and there is no mineral extraction occurring on or adjacent to the proposed project site. Historical mines within the County include mineral deposits of tungsten, copper, gold, magnesium and lead, however most of these mines are now closed – leaving only 30 active mining claims.

Regulatory Setting

California State Surface Mining and Reclamation Act: The California State Surface Mining and Reclamation Act was adopted in 1975 to regulate surface mining to prevent adverse environmental impacts and to preserve the state’s mineral resources. The Act is enforced by the California Department of Conservation’s Division of Mine Reclamation.

Tulare County General Plan: The following mineral resource goals and policies in the Environmental Resource Management Element of the Tulare County General Plan are potentially applicable to the proposed project.

Goal ERM-2: To conserve protect and encourage the development of areas containing mineral deposits while considering values relating to water resources, air quality, agriculture, traffic, biotic, recreation, aesthetic enjoyment, and other public interest values.

- Policy ERM-2.1: The County will encourage the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate
- Policy ERM-2.2: The County will recognize as a part of the General Plan those areas of identified and/or potential mineral deposits
- Policy ERM-2.3: The County will provide for the conservation of identified and/or potential mineral deposits within Tulare County as areas for future resource

development. Recognize that mineral deposits are significantly limited within Tulare County and that they play an important role in support of the economy of the County

- Policy ERM-2.9: The County will encourage the development of mineral deposits in a manner compatible with surrounding land uses
- Policy ERM-2.10: Proposed incompatible land uses in the County shall not be on lands containing or adjacent to identified mineral deposits, or along key access roads, unless adequate mitigation measures are adopted or a statement of overriding considerations stating public benefits and overriding reasons for permitting the proposed use are adopted
- Policy ERM-2.11: The County shall establish procedures to ensure compliance with conditions of approval on all active and idle mines
- Policy ERM-2.12: Tulare County will establish procedures to ensure that vested interest mining operations remain within their approved area and/or production limits
- Policy ERM-2.13: All surface mines in the County, unless otherwise exempted, shall be subject to reclamation plans that meet SMARA requirements. Reclamation procedures shall restore the site for future beneficial use of the land consistent with the Tulare County General Plan, subsequent to the completion of surface mining activities. Mine reclamation costs shall be borne by the mine operator, and guaranteed by financial assurances set aside for restoration procedures

Goal ERM-3: To protect the current and future extraction of mineral resources that are important to the County's economy while minimizing impacts of this use on the public and the environment.

- Policy ERM-3.1: All mining operations in the County shall be required to take precautions to avoid contamination from wastes or incidents related to the storage and disposal of hazardous materials, or general operating activity at the site
- Policy ERM-3.2: Within the County UDBs and HDBs, new commercial mining operations should be limited due to environmental and compatibility concerns
- Policy ERM-3.3: The County shall allow by Special Use Permit small-scale oil and gas extraction activities and facilities that can be demonstrated to not have a significant adverse effect on surrounding or adjacent land and are within an established oil and gas field outside of a UDB
- Policy ERM-3.4: Facilities related to oil and gas extraction and processing in the County may be allowed in identified oil and gas fields subject to a special use permit. The extraction shall demonstrate that it will be compatible with surrounding land uses and land use designations
- Policy ERM-3.5: The County shall require the timely reclamation of oil and gas development sites upon termination of such activities to facilitate the conversion of the land to its primary land use as designated by the General Plan. Reclamation costs shall be borne by the mine operator, and guaranteed by financial assurances set aside for restoration procedures

Discussion

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

No Impact: The project site has no known mineral resources that would be of a value to the region and the residents of the state, therefore the proposed project would not result in the loss of impede the mining of regionally or locally important mineral resources. There is no impact.

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

No Impact: There are no known mineral resources of importance to the region and the project site is not designated under the County's General Plan as an important mineral resource recovery site. For that reason, the proposed project would not result in the loss of availability of known regionally or locally important mineral resources. There is no impact.

XII. NOISE

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b) Exposure of persons to or generation of excessive ground-borne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Environmental Setting

Noise is often described as unwanted sound. Sound is the variation in air pressure that the human ear can detect. If the pressure variations occur at least 20 times per second, they can be detected by the human ear. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz).

Ambient noise is the “background” noise of an environment. Ambient noise levels on the proposed project site are primarily due to agricultural activities and traffic. Construction activities usually result in an increase in sound above ambient noise levels.

The properties surrounding the project site are under agricultural use. Earlimart Middle School is the nearest sensitive receptor and is approximately 2 miles from the project site.

Regulatory Setting

Tulare County General Plan: The Health and Safety Element of the Tulare County General Plan is responsible for establishing noise standards within the county and includes the following goals and policies related to noise that may be applicable to the project.

- **HS-8.11 Peak Noise Generators:** The County shall limit noise generating activities, such as construction, to hours of normal business operation (7 a.m. to 7 p.m.). No peak noise generating activities shall be allowed to occur outside of normal business hours without County approval.
HS-8.18 Construction Noise: The County shall seek to limit the potential noise impacts of construction activities by limiting construction activities to the hours of 7 am to 7pm, Monday through Saturday when construction activities are located near sensitive receptors. No construction shall occur on Sundays or national holidays without a permit from the County to minimize noise impacts associated with development near sensitive receptors.
- **HS-8.19 Construction Noise Control:** The County shall ensure that construction contractors implement best practices guidelines (i.e. berms, screens, etc.) as appropriate and feasible to reduce construction-related noise impacts on surrounding land uses.

Discussion

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?

No Impact: Earlimart Middle School is located approximately 2.2 miles south-east of the project site and is the nearest sensitive receptor. Project construction is anticipated to last approximately 18 months and will result in increased noise levels in the immediate vicinity. The Tulare County General Plan and Tulare County Noise Control Ordinance do not identify noise thresholds for noise sources related to construction, however the General Plan does limit noise generating activities related to construction to daytime hours. The project will comply with these regulations and construction will only occur between 7:00 AM and 7:00 PM.

Long term noise levels would be minimal and limited to noise generated during maintenance and operational tasks, including weekly site visits, levee maintenance, weed abatement, trash removal, and periodic sediment removal. There will be no permanent personnel on-site or continuous operation of noise-generating equipment. As stated in the General Plan, the normally acceptable noise thresholds for agricultural land use areas is 75 dB.

Because noise generated during project construction and operation will not exceed noise thresholds established by the Tulare County General Plan for Agricultural uses, and the project will comply with all regulations regarding construction hours, implementation of the proposed project will not expose persons to noise levels exceeding established standards and there is *no impact*.

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

Less than Significant Impact: Construction of the proposed groundwater retention basin and the proposed outlet will result in some ground-borne vibration; however, this will be temporary and consistent with typical below-ground construction. There are no residences or other sensitive receptors directly adjacent to the project site so excessive levels of ground-borne vibration would not be perceptible. Operation of the proposed project will not result in any ground-borne vibration. The impact is *less than significant*.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

No Impact: Operation of the proposed project would not result in a substantial increase in ambient noise levels above those existing without the project. Long term noise levels would be minimal and limited to noise generated during maintenance and operational tasks, including weekly site visits, levee maintenance, weed abatement, trash removal, and periodic sediment removal. There will be no permanent personnel on-site or continuous operation of noise-generating equipment. The project site is surrounded by agricultural land uses and the noise generated by these maintenance activities would be consistent with noise levels generated by agricultural activities. There is *no impact*.

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

Less Than Significant Impact: Project construction is anticipated to last approximately 18 months and will result in increased noise levels in the immediate vicinity. Construction equipment would include generators, excavators, tractors, rubber-tired dozers, graders, rollers, scrapers, cranes, forklifts and welders. The County's Noise Control Ordinance requires noise-producing equipment used during construction to be restricted to the hours between 7:00 a.m. to 7:00 p.m. Construction would not occur outside of these hours. Compliance with county noise control measures will prevent significant impacts related to increased ambient noise levels as a result of construction. Because the project will comply with all county noise control measures, and there are no residences or other sensitive receptors directly adjacent to the project site, the impact would be considered *less than significant*.

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

No Impact: The project site is not located in an airport land use plan. Mefford Field is the nearest public airport and is located approximately 16.5 miles away from the proposed project site. There is *no impact*.

- 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?**

No Impact: San Joaquin Sprayers Inc. Heliport is the nearest private air strip and is located approximately 10 miles away from the proposed project site. This distance is sufficient to prevent excessive noise exposure to persons working within the project site. There is *no impact*.

XIII. POPULATION AND HOUSING

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (for example, by new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Environmental Setting

The United States Census Bureau estimated the population in Tulare County to be 459,863 in 2015. This is an increase from the 2010 census, which counted the population in Tulare County to be 443,081. Factors that influence population growth include job availability, housing availability, and the capacity of existing infrastructure.

Regulatory Setting

The Tulare County population size is controlled by the development code and Land Use Element of the General Plan. These documents regulate the number of dwelling units per acre allowed on various land uses and establish minimum and maximum lot sizes. These factors have a direct impact on the County's population size.

Discussion

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

No Impact: Construction and operation of the proposed project would not result in any population growth within Tulare County. Project operations would not require any long-term, on-site employees and maintenance activities would be conducted by existing Pixley Irrigation District Employees. The project would not create any long-term employment opportunities that would lead to population growth. There is *no impact*.

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

No Impact: The project would require the removal of one residential structure, however the residential structure is currently vacant and no replacement housing would be required. There is *no impact*.

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

No Impact: The project would require the removal of one residential structure, however the residential structure is currently vacant and no persons would be displaced. There is *no impact*.

XIV. PUBLIC SERVICES

Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable serve ratios, response times of other performance objectives for any of the public services:				
a. Fire protection?	☐	☐	☐	☒
b. Police protection?	☐	☐	☐	☒
c. Schools?	☐	☐	☐	☒
d. Parks?	☐	☐	☐	☒
e. Other public facilities?	☐	☐	☐	☒

Environmental Setting

Fire: The project site is served by the Tulare County Fire Protection Department which operates 27 fire stations within unincorporated areas of the County and is headquartered in Farmersville, CA. The FCFPD responds to over 12,000 calls annually.

Police: Law enforcement services are provided to the project site via the Tulare County Sheriff's Department. Tulare County will continue to provide police protection services to the proposed project site upon development. The nearest Tulare County Sheriff's Office is located in Pixley, approximately 4 miles north of the proposed project site.

Schools: The proposed project site is located within the Tulare High School District and Pixley Elementary School District. The nearest school, Earlimart Middle School, is within Earlimart School District and is located approximately 2.0 miles south-east of the project site.

Regulatory Setting

School Districts in Tulare County are regulated by the California Department of Education and the Tulare County Sheriffs Department is regulated by the California Department of Justice. Objectives and Policies relating to Law Enforcement, Fire Protection, and School Facilities are included in the Public Facilities and Services Element of the Tulare County General Plan. The Goals and Policies potentially applicable to the proposed project are as follows:

- PFS-7.2 Fire Protection Standards: The County shall require all new development to be adequately served by water supplies, storage, and conveyance facilities supplying adequate volume, pressure, and capacity for fire protection.
- PFS-7.7 Cost Sharing: The County shall require new development to pay public facility fees associated with new sheriff/fire station facilities and equipment necessary to maintain the County's service standards in that area. New development may also be required to create or join a special assessment district, or other funding mechanism, to pay the costs associated with the operation of a sheriff/fire station.

Discussion

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable serve ratios, response times of other performance objectives for any of the public services:

a. Fire protection?

No Impact: Implementation of the proposed project will not result in increased demand for fire protection services. There is *no impact*.

b. Police protection?

No Impact: Implementation of the proposed project will not result in increased demand for fire protection services. There is *no impact*.

c. Schools?

No Impact: The proposed project does not include any residential developments and would not result in any permanent, on-site employees. The project will not result in additional residents to Tulare County, and will not increase the number of students in the school district. Therefore, there is *no impact*.

d. Parks?

No Impact: Because the project will not result in additional residents, the project will not create need for additional parkland. Therefore, there is *no impact*.

e. Other public facilities?

No Impact: The proposed project will not result in addition residents or create additional jobs. The project will have *no impact* on other public facilities.

XV. PARKS AND RECREATION

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Environmental Setting

There are 13 parks that are owned and operated by Tulare County. Pixley Park is the closest recreational area to the project site and is located approximately 4.2 miles north of the project site.

Regulatory Setting

Tulare County General Plan: The Environmental Resources Management Element of the Tulare County General Plan contains the following recreational resource goals and policies potentially applicable to the project.

- ERM-5.3 Park Dedication Requirements: The County shall require the dedication of land and/or payment of fees, in accordance with local authority and State law (for example the Quimby Act), to ensure funding for the acquisition and development of public recreation facilities.
- ERM-5.7 Public Water Access: The County shall give a high priority to the acquisition of public access rights to water courses. Acquisition of multi-purpose sites, such as the protection of drainage ways, wildlife habitats, and scenic assets, shall be encouraged. In the lakefront areas of Lake Success and Lake Kaweah, special consideration should be given to matching recreational needs of the community with lake access.
- ERM-5.8 Watercourse Development: The County, in approving recreational facilities along major watercourses, shall require a buffer of at least 100 feet from the high-water line edge/bank and screening vegetation as necessary to address land use compatibility issues. The establishment of a buffer may not be required when mitigated or may not apply to industrial uses that do not impact adjoining uses identified herein.

Discussion

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

No Impact: The proposed project does not include any residential developments and would not result in any permanent, on-site employees resulting in additional residents to Tulare County. Because the project will not result in an increased population in Tulare County, the project will not increase the use of existing parkland or create need for additional parkland. There is no *impact*.

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

No Impact: There are no parkland or recreational facilities associated with the project. The project will not result in additional residents and the project will not create need for additional parkland. Therefore, there is no *impact*.

XVI. TRANSPORTATION/TRAFFIC

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

Environmental Setting

Vehicular Access: Vehicular access to the project is available on Avenue 72. Highland Avenue (State Route 43). Tulare County is the primary authority for local roads. Other transportation facilities include a network of unpaved, private roads within the proposed project site property. These provide full access to the project.

Parking: During construction, workers will utilize existing facility parking areas and/or temporary construction staging areas for parking of vehicles and equipment. During project operations, there will be no permanent personnel on-site and no additional parking facilities will be required.

Regulatory Setting

Tulare County Improvement Standards: The Tulare County Improvement Standards are developed and enforced by the Tulare County Public Works Department to guide the development and maintenance of County Roads. The cross section drawings contained in the County Improvement Standards dictate the development of roads within the county.

Tulare County General Plan: The County assesses the acceptability of roadways using Level of Service (LOS). The County has an LOS threshold of “D” for County roads.

Discussion

- a) **Would the project 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?**

No Impact: The proposed project consists of the construction and operation of an inlet, outlet, canal, and groundwater recharge basin divert excess surface water from an existing Canal. The project will not require any changes to existing transportation systems and will have no impact on any plans, ordinances, or policies related to the effectiveness or performance of the circulation system. There would *no impact*.

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

Less Than Significant Impact: During construction, the project may impact congestion for areas of Avenue 72 within the vicinity of the project site. However, impacts will be temporary and major delays exceeding LOS thresholds established by the Circulation Element of the County’s General Plan are unlikely to occur. Project operations will not have any impact on congestion within the vicinity of the project area. Project operations will generate approximately 3 trips per week for general maintenance activities. The project will not generate daily trips as there will be no permanent, on-site personnel.

Because construction related traffic would not create congestion levels exceeding LOS D thresholds established by the County, and project operations would not contribute to congestion in the area, the impact is *less than significant*.

- c) **Would the project 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?**

No Impact: The proposed project is located approximately 10.0 miles from the nearest air field (San Joaquin Sprayers Incorporated Heliport). The project site is not within an airport land use plan and implementation of the proposed project would not impact air traffic patterns in any way. There is no impact.

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

No Impact: No public roadway design features or incompatible uses are included in the proposed project. All equipment will remain on-site and outside of public R-O-W. There is *no impact*.

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

Less Than Significant Impact: This project would not result in inadequate emergency access. Emergency access to the site would be via Avenue 72. A network of private roads on the proposed project property provide full access onto and off of the project site. Any impacts related to emergency access would be *less than significant*.

- f) **Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?**

No Impact: The project would not conflict with any other travel policies plans or programs regarding public transit, bicycle, or pedestrian facilities. There would be *no impact*.

XVII. Tribal Cultural Resources

Would the project: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Environmental Setting

The Pixley Groundwater Basin site is located approximately 15 miles from what is believed to be the former shoreline of Tulare Lake, once referred to as the largest body of fresh water west of the Mississippi. Studies of the prehistory of Tulare County show inhabitants of the San Joaquin Valley maintained fairly dense populations situated along the banks of major waterways, wetlands, and streams. The area has been occupied inhabited by aboriginal California Native American groups consisting of the Southern Valley Yokuts, Foothill Yokuts, Monache, and Tubatulabal for over 10,000 years.

Of the main groups inhabiting the Tulare County area, the Southern Valley Yokuts occupied the largest territory. The Yokuts numbered about 25,000, and were clustered into about fifty independent local sub-tribes. Historians believe approximately 22 villages stretched from Stockton northerly to the Tehachapi Mountains southerly, although most were concentrated around Tulare Lake, Kaweah River and its tributaries. As a result, numerous of cultural resource sites have been identified in Tulare County.

Cultural Resources Record Search and Native American Consultation: A records search was conducted on behalf of the Applicant at the Southern San Joaquin Valley Archaeological Information Center (AIC), to determine if historical or archaeological sites had previously been recorded within the study area, if the project area had been systematically surveyed by archaeologists prior to the initial study, and/or whether the region of the field project was known to contain archaeological sites and to thereby be archaeologically sensitive.

The records search stated that there have been no previous cultural resource studies conducted within the project area, however seven studies were conducted within a one-half mile radius of the project. identified three recorded cultural resources within a one-half mile radius of the project area. According to the records search, there are no recorded cultural resources within the project area, however there are three recorded cultural resources within a one-half mile radius of the project site. These resources consist of two historic era earthen canals and one historic era railroad. Additionally, there is a historic era bridge in the one-half mile radius that is known but unrecorded. The full findings of the cultural records search can be found in Appendix C.

Regulatory Setting

Definitions

Historical Resources: Historical resources are defined by CEQA as resources that are listed in or eligible for the California Register of Historical Resources, resources that are listed in a local historical resource register, or resources that are otherwise determined to be historical under California Public Resources Code Section 21084.1 or California Code of Regulations Section 15064.5. Under these definitions Historical Resources can include archaeological resources, Tribal cultural resources, and Paleontological Resources.

Archaeological Resources: As stated above, archaeological resources may be considered historical resources. If they do not meet the qualifications under the California Public Resources Code 21084.1 or California Code of Regulations Section 15064.5, they are instead determined to be “unique” as defined by the CEQA Statute Section 21083.2. A unique archaeological resource is an artifact, object, or site that: (1) contains information (for which there is a demonstrable public interest) needed to answer important scientific research questions; (2) has a special and particular quality, such as being the oldest of its type or the best available example of its type; or (3) is directly associated with a scientifically recognized important prehistoric or historic event or person.

Tribal Cultural Resource (TCR): Tribal Cultural Resources can include site features, places, cultural landscapes, sacred places, or objects, which are of cultural value to a Tribe. It is either listed on or eligible for the CA Historic Register or a local historic register, or determined by the lead agency to be treated as TCR.

Paleontological Resources: For the purposes of this section, “paleontological resources” refers to the fossilized plant and animal remains of prehistoric species. Paleontological Resources are a limited scientific and educational resource and are valued for the information they yield about the history of the earth and its ecology. Fossilized remains, such as bones, teeth, shells, and leaves, are found in geologic deposits (i.e., rock formations). Paleontological resources generally include the geologic formations and localities in which the fossils are collected.

National Historic Preservation Act: The National Historic Preservation Act was adopted in 1966 to preserve historic and archeological sites in the United States. The Act created the National Register of Historic Places, the list of National Historic Landmarks, and the State Historic Preservation offices.

California Historic Register: The California Historic Register was developed as a program to identify, evaluate, register, and protect Historical Resources in California. California Historical Landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific, religious, experimental, or other value. In order for a resource to be designated as a historical landmark, it must meet the following criteria:

- The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).
- Associated with an individual or group having a profound influence on the history of California.
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.

Tulare County General Plan: The Resource Land Use Designations of the 2035 Tulare County General Plan includes the following objective pertaining to cultural and historic resources:

Goal PF-6: To work with agencies, districts, utilities, and Native American tribes to promote consistency with the County's General Plan.

- Policy PF-6.1: Plans for Jurisdictions, Agencies, District, Utilities, and Native American Tribes The County shall work with Tulare County cities; adjacent counties and cities; Federal, State, and regional agencies; local districts; utility providers; Native American tribes; and the military to ensure that their plans are consistent with Tulare County's General Plan to the greatest extent possible.
- PF-6.2 Intergovernmental Coordination The County shall work with Federal, State, and regional agencies; local districts; utility providers; Native American tribes; and the military to ensure that the County and the public are involved, as appropriate, throughout any planning process and that agency and public input is requested

Goal ERM-6: To manage and protect sites of cultural and archaeological importance for the benefit of present and future generations.

- *Policy ERM-6.8.* The County shall continue to solicit input from the local Native American communities in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance.

Paleontological Resources: Paleontological resources are any fossilized remains, traces, or imprints of organisms, preserved in or on the earth's crust, that are of paleontological interest and that provide information about the history of life on earth, with the exception of materials associated with an archaeological resource [as defined in Section 3(1) of the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470bb[1]), or any cultural item as defined in Section 2 of the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001)].

Native American Reserve (NAR): This designation recognizes tribal trust and reservation lands managed by a Native American Tribe under the United States Department of the Interior's Bureau of Indian Affairs over which the County has no land use jurisdiction. The County encourages adoption of tribal management plans for these areas that consider compatibility and impacts upon adjacent area facilities and plans.

Discussion

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

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

Less Than Significant Impact with Mitigation: The project would not cause a substantial adverse change in the significance of a tribal cultural resource, nor is it listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources. Based on the results of the records search and Native American outreach, no previously recorded cultural resources are located within the project site. Although no historical resources were identified, the presence of remains or unanticipated cultural resources under the ground surface is possible. Implementation of Mitigation Measures CUL-1, CUL-2, CUL-3, and CUL-4 will ensure that impacts to this checklist item will be *less than significant with mitigation* incorporation.

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

Less Than Significant Impact with Mitigation: The lead agency has not determined there to be any known tribal cultural resources located within the project area. Additionally, there are not believed to be any paleontological resources or human remains buried within the project area's vicinity. However, if resources were found to be

significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American Tribe. Implementation of Mitigation Measures CUL-1, CUL-2, CUL-3, and CUL-4 will ensure that any impacts resulting from project implementation remain *less than significant with mitigation* incorporation.

Mitigation Measures for Impacts to Cultural Resources:

Mitigation Measure TCR-1: Tribal representatives will be invited to survey the site for signs of surface or subsurface cultural resources prior to the start of construction activities.

Mitigation Measure TCR-2: Project construction workers will be required to participate in a Cultural Sensitivity Training program. This program is intended to increase awareness of cultural resources that may be found on the site and inform construction workers of their responsibility to identify and protect cultural resources found within the project area.

Mitigation Measure TCR-3: If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (NPS 1983) shall be contacted immediately to evaluate the find. If the discovery proves to be significant under CEQA, additional work such as data recovery excavation and Native American consultation may be warranted to mitigate any adverse effects.

Mitigation Measure TCR-4: The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

Mitigation Measure TCR-5: Prior to any ground disturbance, a surface inspection of the Project site shall be conducted by a qualified archeologist. The qualified archeologist shall monitor the site during ground disturbing activities. The archeologist shall provide pre-construction briefings to supervisory personnel, any excavation contractor, and any person who will perform unsupervised, ground disturbing work on the project in connection with construction. These meetings will include information on potential cultural material findings and how to act on the procedures if resources are found.

Mitigation Measure TCR-6: Prior to any ground disturbance, the applicant shall offer interested Tribes the opportunity to provide a Native American Monitor during ground disturbing activities during construction. Tribal participation would be dependent upon the availability and interest of the Tribe.

Mitigation Measure TCR-7: In the event that cultural resources, paleontological resources or unique geologic features are discovered during construction, operations shall stop within 100 feet of the find, and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall determine the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with §15064.5 of the CEQA Guidelines. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options. Any previously undiscovered resources found during construction within the Project area shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance. No further ground disturbance shall occur in the immediate vicinity of the discovery until approved by the qualified archaeologist. Prior to any ground disturbance, the applicant shall enter into an agreement with the Yokut Tribe (“Tribe”) regarding cultural resources and burial treatment and protection (“Plan”), which shall be in a form acceptable to the Tribe County. Upon discovery of cultural resources, in addition to other procedures described in this mitigation measure, the Tulare County Resource Management Agency, along with other relevant agency or Tribal officials, shall be contacted to begin coordination on the disposition of the find(s), and treatment of any significant cultural resource shall be undertaken pursuant to the Plan. In the event of any conflict between this mitigation measure and the Plan, the stipulations of the Plan shall control.

Mitigation Measure TCR-8: Upon coordination with the Tulare County Resource Management Agency, any archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution where they would be afforded long-term preservation. Documentation for the work shall be provided in accordance with applicable cultural resource laws and guidelines.

XVIII. UTILITIES AND SERVICE SYSTEMS

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

Environmental Setting

Wastewater: The proposed project does not include permanent restroom facilities or other wastewater sources. No additional wastewater treatment services will be required as a result of project implementation.

Solid Waste: Solid waste disposal will be provided by the Tulare County Solid Waste Department, which operates two landfills and six transfer stations within the county. Combined, these landfills receive approximately 300,000 tons of solid waste per day.

Water: Existing water entitlements currently provide water to the proposed project site. Implementation of the proposed project will not require additional water entitlements.

Regulatory Setting

CalRecycle: California Code of Regulations, Title 14, Natural Resources – Division 7 contains all current CalRecycle regulations regarding nonhazardous waste management in the state. These regulations include standards for the handling of solid waste, standards for the handling of compostable materials, design standards for disposal facilities, and disposal standards for specific types of waste.

Central Valley RWQCB: The Central Valley RWQCB requires a Stormwater Pollution Prevention Plan (SWPPP) for projects disturbing more than one acre of total land area. Because the project is greater than one acre, a SWPPP to manage stormwater generated during project construction. will be required.

The Central Valley RWQCB regulates Wastewater Discharges to Land by establishing thresholds for discharged pollutants and implementing monitoring programs to evaluate program compliance. This program regulates approximately 1500 dischargers in the region.

The Central Valley RWQCB is also responsible for implementing the federal program, the National Pollutant Discharge Elimination System (NPDES). The NPDES Program is the federal permitting program that regulates discharges of pollutants to surface waters of the U.S. Under this program, a NPDES permit is required to discharge pollutants into Water's of the U.S. There are 350 permitted facilities within the Central Valley Region.

Discussion

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact: No permanent restroom facilities are proposed and no wastewater will be generated as a result of project implementation. There is *no impact*.

b) Would the project require or result in the construction of new water or waste-water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact: No wastewater will be generated as a result of project implementation and no new water entitlements will be required. There will be no change to facilities or operations at existing water or wastewater treatment facilities. There is *no impact*.

c) Would the project 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?

No Impact: Additional water entitlements are not proposed for the project site, wastewater will not be generated as a result of project implementation, and all stormwater will be

contained on-site. There will be no change to facilities or operations at existing stormwater management facilities and there is *no impact*.

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

No Impact: The proposed project would be used to divert excess surface waters from an existing canal for groundwater recharge. Any surface water to be diverted to the recharge basin during operations will include imported surface water, either through purchase, contract, or transfer. Water used to recharge basins will be purchased from the Friant Division of the Central Valley Project when excess Friant water is available. The project will supplement the region's water supply during dry periods and support agricultural activity in the region. Additional water entitlements are not proposed for the site. Water use will be limited to dust control during construction and certain maintenance activities during project operations. Because water use resulting from this project is minimal, the existing water entitlement is sufficient and there is *no impact*.

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

No Impact: No wastewater will be produced as a result of project implementation and no septic system or other disposal facilities will be required. There would be *no impacts* to the applicable wastewater treatment provider.

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact: Waste Management will be provided by the Tulare County Solid Waste Department. Very little solid waste is anticipated as a result of project implementation and the landfills have sufficient permitted capacity to accommodate the project's solid waste disposal needs. The impact is *less than significant*.

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

No Impact: This proposed project conforms to all applicable statutes and regulations related to solid waste disposal. The proposed project will comply with the adopted policies related to solid waste, and will comply with all applicable federal, state, and local statutes and regulations pertaining to disposal of solid waste, including recycling. Therefore, the proposed project would have *no impact* on solid waste regulations.

XIX. MANDATORY FINDINGS OF SIGNIFICANCE

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

Discussion

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

Less Than Significant Impact with Mitigation Incorporation: This initial study/mitigated negative declaration found the project could have significant impacts on biological and cultural resources. However, implementation of the identified mitigation measures for each respective section would ensure that impacts are *less than significant with Mitigation Incorporation*.

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

Less Than Significant Impact: CEQA Guidelines Section 15064(i) states that a Lead Agency shall consider whether the cumulative impact of a project is significant and whether the effects of the project are cumulatively considerable. The assessment of the significance of the cumulative effects of a project must, therefore, be conducted in connection with the effects of past projects, other current projects, and probable future projects. Due to the nature of the project and consistency with environmental policies, incremental contributions to impacts are considered less than cumulatively considerable. The proposed project would not contribute substantially to adverse cumulative conditions, or create any substantial indirect impacts (i.e., increase in population could lead to an increase need for housing, increase in traffic, air pollutants, etc). Impacts would be *less than significant*.

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

Less Than Significant Impact: The analyses of environmental issues contained in this Initial Study indicate that the project is not expected to have substantial impact on human beings, either directly or indirectly. Mitigation measures have been incorporated in the project design to reduce all potentially significant impacts to less than significant, which results in a *less than significant* impact to this checklist item.

XX. MITIGATION MONITORING AND REPORTING PROGRAM

As required by Public Resources Code Section 21081.6, subd. (a)(1), a Mitigation Monitoring and Reporting Program (MMRP) has been prepared for the project in order to monitor the implementation of the mitigation measures that have been adopted for the project. This Mitigation Monitoring and Reporting Program (MMRP) has been created based upon the findings of the Initial Study/Mitigated Negative Declaration (IS/MND) for the Pixley Recharge Project proposed by Pixley Irrigation District in Tulare County.

The first column of the table identifies the mitigation measure. The second column names the party responsible for carrying out the required action. The third column, "Timing of Mitigation Measure" identifies the time the mitigation measure should be initiated. The fourth column, "Responsible Party for Monitoring," names the party ensuring that the mitigation measure is implemented. The last column will be used by the Irrigation District to ensure that the individual mitigation measures have been monitored.

Plan checking and verification of mitigation compliance shall be the responsibility of Pixley Irrigation District.

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure BIO-1a: Preconstruction surveys for the San Joaquin kit fox shall be conducted on and within 200 feet of the project site, no less than 14 days and no more than 30 days prior to the start of ground disturbance activities on the site. The primary objective is to identify kit fox habitat features (e.g., potential dens and refugia) on and adjacent to the site and evaluate their use by kit foxes. Preconstruction surveys will be repeated following any lapses in construction of 30 days or more.	Project Sponsor	Between 14 and 30 days prior to the start of construction and ongoing during construction.	Pixley Irrigation District	
Mitigation Measure BIO-1b: Should active kit fox dens be detected during preconstruction surveys, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified. A disturbance-free buffer will be established around the burrows in consultation with the USFWS and CDFW, to be maintained until an agency-approved biologist has determined that the burrows have been abandoned.	Project Sponsor	Ongoing during construction.	Pixley Irrigation District	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure BIO-1c: Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes in accordance with the USFWS Standardized Recommendations. The applicant shall implement all minimization measures presented in the Construction and Ongoing Operational Requirements section of the Standardized Recommendations, including, but not limited to: restriction of project related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g. pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash. See Appendix E of Appendix B for more details.	Project Sponsor	Ongoing during construction.	Pixley Irrigation District	
Mitigation Measure BIO-1d: Prior to the start of construction, the applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat needs; a report of the occurrence of kit fox in the project vicinity; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation. The training will include a handout with all of the training information included in it. The applicant will use this handout to train any construction personnel that were not in attendance at the first meeting, prior to those personnel starting work on the site.	Project Sponsor	Prior to the start of construction and ongoing during construction.	Pixley Irrigation District	
Mitigation Measure BIO-1e: The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.	Project Sponsor	Ongoing during construction.	Pixley Irrigation District	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure BIO-2a: Project-related vehicular and equipment travel along the Deer Creek access road shall observe a speed limit of 10 mph. During travel along this road, vehicle and equipment operators shall continually scan for lizards and snakes. If lizards or snakes are observed on the road, the operator will stop the vehicle/equipment, and wait for the animals to move off the road before resuming travel.	Project Sponsor	Ongoing during construction.	Pixley Irrigation District	
Mitigation Measure BIO-2b: A description of this species and measures to avoid mortality will be included and presented in the employee education program described above in Mitigation Measure BIO-1d.	Project Sponsor	Prior to the start of construction	Pixley Irrigation District	
Mitigation Measure BIO-3a: A take avoidance survey for burrowing owls will be conducted by a qualified biologist between 14 and 30 days prior to the start of construction. This take avoidance survey will be conducted according to methods described in the Staff Report on Burrowing Owl Mitigation (CDFG 2012). The survey area will include all potential roosting and nesting habitat on and within 200 meters of project impact areas, where accessible.	Project Sponsor	Between 14 and 30 days prior to the start of construction and ongoing during construction.	Pixley Irrigation District	
Mitigation Measure BIO-3b: If project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are identified within or near project impact areas, a 200-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.	Project Sponsor	Ongoing during construction.	Pixley Irrigation District	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure BIO-3c: During the non-breeding season (September 1-January 31), resident owls occupying burrows in project impact areas may either be avoided, or passively relocated to alternative habitat. If the applicant chooses to avoid active owl burrows within the impact area during the non-breeding season, a 50-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing, and will remain in place until a qualified biologist determines that the burrows are no longer active. If the applicant chooses to passively relocate owls during the non-breeding season, this activity will be conducted in accordance with a relocation plan prepared by a qualified biologist.	Project Sponsor	Ongoing during construction.	Pixley Irrigation District	
Mitigation Measure BIO-4a: A preconstruction survey for American badgers will be conducted by a qualified biologist within 30 days of the start of construction. Preconstruction surveys will be conducted in all potential denning habitat on the project site.	Project Sponsor	Within 30 days prior to the start of construction	Pixley Irrigation District	
Mitigation Measure BIO-4b: Should an active natal den be identified during the preconstruction surveys, a suitable disturbance-free buffer will be established around the den and maintained until a qualified biologist has determined that the cubs have dispersed or the den has been abandoned.	Project Sponsor	Prior to the start of construction	Pixley Irrigation District	
Mitigation Measure BIO-5a: In order to avoid impacts to nesting raptors and migratory birds, the project will be constructed, if feasible, outside the nesting season, or between September 1st and January 31st.	Project Sponsor	Ongoing during construction.	Pixley Irrigation District	
Mitigation Measure BIO-5b: If project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 14 days prior to the start of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet, where accessible, for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to 6 mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.	Project Sponsor	Within 14 days prior to the start of construction	Pixley Irrigation District	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure BIO-5c: Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.	Project Sponsor	Within 14 days prior to the start of construction	Pixley Irrigation District	
Mitigation Measure BIO-6a: To avoid potential impacts to maternity bat roosts, building demolition should occur outside of the period between April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.	Project Sponsor	Ongoing during construction	Pixley Irrigation District	
Mitigation Measure BIO-6b: If removal of buildings is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to their removal, a qualified biologist will survey them for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.	Project Sponsor	Within 30 days prior to the start of construction	Pixley Irrigation District	
Mitigation Measure BIO-6c: If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted under the direction of a qualified biologist.	Project Sponsor	Within 30 days prior to the start of construction	Pixley Irrigation District	
Mitigation Measure BIO-6d: If a maternity colony is detected during preconstruction surveys, the biologist will identify a suitable disturbance-free buffer around the colony. The buffer will remain in place until the biologist determines that the nursery is no longer active.	Project Sponsor	Within 30 days prior to the start of construction	Pixley Irrigation District	
Mitigation Measure BIO-7a: Where the project site adjoins Deer Creek, the applicant will define the limits of construction with flagging, fencing, or other easily visible means. No ground-disturbing activities shall take place outside of the defined limits.	Project Sponsor	Prior to the start of construction.	Pixley Irrigation District	
Mitigation Measure BIO-7b: Straw wattles or other appropriate erosion controls will be placed between ground-disturbing activities and the Deer Creek channel.	Project Sponsor	Prior to the start of construction.	Pixley Irrigation District	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure BIO-7c: The applicant will arrange for the preparation of a Storm Water Pollution Prevention Plan (SWPPP) that identifies measures to prevent erosion and sedimentation of Deer Creek and measures to prevent contaminants from entering storm water. The SWPPP will be implemented in full during project construction.	Project Sponsor	Prior to the start of construction.	Pixley Irrigation District	
Mitigation Measure CUL-1: If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (NPS 1983) should be contacted immediately to evaluate the find. If the discovery proves to be significant under CEQA, additional work such as data recovery excavation and Native American consultation may be warranted to mitigate any adverse effects.	Project Sponsor	Ongoing during construction.	Pixley Irrigation District	
Mitigation Measure CUL-2: The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.	Project Sponsor	Ongoing during construction.	Pixley Irrigation District	
Mitigation Measure TCR-1: Tribal representatives will be invited to survey the site for signs of surface or subsurface cultural resources prior to the start of construction activities.	Project Sponsor	Prior to the start of Construction.	Pixley Irrigation District	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure TCR-2: Project construction workers will be required to participate in a Cultural Sensitivity Training program. This program is intended to increase awareness of cultural resources that may be found on the site and inform construction workers of their responsibility to identify and protect cultural resources found within the project area.	Project Sponsor	Prior to the start of Construction.	Pixley Irrigation District	
Mitigation Measure TCR-3: If cultural resources are encountered during ground-disturbing activities, work in the immediate area must halt and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (NPS 1983) shall be contacted immediately to evaluate the find. If the discovery proves to be significant under CEQA, additional work such as data recovery excavation and Native American consultation may be warranted to mitigate any adverse effects.	Project Sponsor	Ongoing during construction.	Pixley Irrigation District	
Mitigation Measure TCR-4: The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.	Project Sponsor	Ongoing during construction.	Pixley Irrigation District	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure TCR-5: Prior to any ground disturbance, a surface inspection of the Project site shall be conducted by a qualified archeologist. The qualified archeologist shall monitor the site during ground disturbing activities. The archeologist shall provide pre-construction briefings to supervisory personnel, any excavation contractor, and any person who will perform unsupervised, ground disturbing work on the project in connection with construction. These meetings will include information on potential cultural material findings and how to act on the procedures if resources are found.	Project Sponsor	Prior to the start of construction.	Pixley Irrigation District	
Mitigation Measure TCR-6: Prior to any ground disturbance, the applicant shall offer interested Tribes the opportunity to provide a Native American Monitor during ground disturbing activities during construction. Tribal participation would be dependent upon the availability and interest of the Tribe.	Project Sponsor	Prior to the start of construction.	Pixley Irrigation District	

Mitigation Measure	Responsible Party for Implementation	Implementation Timing	Responsible Party for Monitoring	Verification
Mitigation Measure TCR-7: In the event that cultural resources, paleontological resources or unique geologic features are discovered during construction, operations shall stop within 100 feet of the find, and a qualified archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall determine the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with §15064.5 of the CEQA Guidelines. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing, and data recovery, among other options. Any previously undiscovered resources found during construction within the Project area shall be recorded on appropriate Department of Parks and Recreation forms and evaluated for significance. No further ground disturbance shall occur in the immediate vicinity of the discovery until approved by the qualified archaeologist. Prior to any ground disturbance, the applicant shall enter into an agreement with the Yokut Tribe ("Tribe") regarding cultural resources and burial treatment and protection ("Plan"), which shall be in a form acceptable to the Tribe County. Upon discovery of cultural resources, in addition to other procedures described in this mitigation measure, the Tulare County Resource Management Agency, along with other relevant agency or Tribal officials, shall be contacted to begin coordination on the disposition of the find(s), and treatment of any significant cultural resource shall be undertaken pursuant to the Plan. In the event of any conflict between this mitigation measure and the Plan, the stipulations of the Plan shall control.	Project Sponsor	Ongoing during construction.	Pixley Irrigation District	
Mitigation Measure TCR-8: Upon coordination with the Tulare County Resource Management Agency, any archaeological artifacts recovered shall be donated to an appropriate Tribal custodian or a qualified scientific institution where they would be afforded long-term preservation. Documentation for the work shall be provided in accordance with applicable cultural resource laws and guidelines.	Project Sponsor	Ongoing during construction.	Pixley Irrigation District	

3.6 Supporting Information and Sources

- 1.** Tulare County General Plan
- 2.** Tulare County General Plan EIR
- 3.** Tulare County Regional Climate Action Plan
- 4.** Tulare County Zoning Ordinance
- 5.** Engineering Standards, Tulare County
- 6.** SJVAPCD Regulations and Guidelines
- 7.** Flood Insurance Rate Maps
- 8.** California Air Resources Board's (CARB's) Air Quality and Land Use Handbook
- 9.** 2008 (California Environmental Quality Act CEQA Guidelines
- 10.** California Building Code
- 11.** California Stormwater Pollution Prevention Program (SWPPP)
- 12.** Government Code Section 65962.5
- 13.** California Environmental Protection Agency (CEPA)

Section 4

List of Preparers

Pixley Irrigation District

357 E Olive Street
Tipton, CA 93272

SECTION 4

List of Preparers

Project Title: Pixley Recharge Basin

List of Preparers

4-Creeks Inc.

- David Duda, AICP, GISP
- Aaron Carpenter, Associate Planner
- Molly McDonnel, Assistant Planner

Persons and Agencies Consulted

The following individuals and agencies contributed to this Initial Study/Mitigated Negative Declaration:

4-Creeks Inc.

- David De Groot, PE.
- Matt Razor, PE.

Pixley Irrigation District

- Eric Limas, General Manager

California Historic Resources Information System

- Celeste Thomson, Coordinator

Live Oak and Associates

- Jeff Gurule, Senior Project Manager
- Austin Pearson, Director of Ecological Services

Appendix A

CalEEMod Report

Reservoir - Tulare County, Annual

Reservoir
Tulare County, Annual**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	160.00	Acre	160.00	6,969,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	51
Climate Zone	3			Operational Year	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Reservoir - Tulare County, Annual

Project Characteristics - Project located near Pixley in Tulare County

Land Use - Project site is approximately 160 acres

Construction Phase - This project will take 18 months to complete

Off-road Equipment - This project will use cranes, a generator, and a loader to complete the construction phase.

Off-road Equipment -

Off-road Equipment - This project will have only two tractors/loaders/backhoes for the grading phase.

Off-road Equipment -

Trips and VMT - The project will average 15 worker trips per day and 5 vendor trips per day during project construction. Material will be hauled approximately 5 mile offsite.

Grading - Basin capacity will total 1337 acre feet (see site plan)

Area Coating - No additional parking is proposed

Land Use Change -

Energy Use -

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Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	3,100.00	43.00
tblConstructionPhase	NumDays	310.00	263.00
tblConstructionPhase	NumDays	120.00	87.00
tblConstructionPhase	PhaseEndDate	7/2/2020	6/30/2020
tblConstructionPhase	PhaseEndDate	10/1/2019	5/1/2020
tblConstructionPhase	PhaseEndDate	3/11/2019	5/1/2019
tblConstructionPhase	PhaseStartDate	10/2/2019	5/1/2020
tblConstructionPhase	PhaseStartDate	3/12/2019	5/1/2019
tblGrading	AcresOfGrading	657.50	160.00
tblGrading	MaterialExported	0.00	2,157,023.00
tblTripsAndVMT	HaulingTripLength	20.00	5.00
tblTripsAndVMT	HaulingVehicleClass	HHDT	EMFAC_Mix
tblTripsAndVMT	VendorTripNumber	1,142.00	5.00
tblTripsAndVMT	WorkerTripNumber	18.00	15.00
tblTripsAndVMT	WorkerTripNumber	20.00	15.00
tblTripsAndVMT	WorkerTripNumber	2,927.00	15.00

2.0 Emissions Summary

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2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.8759	8.2328	5.7763	0.0130	2.2846	0.3205	2.6051	1.0261	0.2951	1.3211	0.0000	1,179.0977	1,179.0977	0.2322	0.0000	1,184.9030
2020	0.3659	3.3326	2.6231	6.2300e-003	1.4646	0.1230	1.5875	0.5815	0.1137	0.6952	0.0000	559.8712	559.8712	0.1041	0.0000	562.4736
Maximum	0.8759	8.2328	5.7763	0.0130	2.2846	0.3205	2.6051	1.0261	0.2951	1.3211	0.0000	1,179.0977	1,179.0977	0.2322	0.0000	1,184.9030

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.8759	8.2328	5.7763	0.0130	2.2846	0.3205	2.6051	1.0261	0.2951	1.3211	0.0000	1,179.0969	1,179.0969	0.2322	0.0000	1,184.9022
2020	0.3659	3.3326	2.6231	6.2300e-003	1.4646	0.1230	1.5875	0.5815	0.1137	0.6952	0.0000	559.8708	559.8708	0.1041	0.0000	562.4732
Maximum	0.8759	8.2328	5.7763	0.0130	2.2846	0.3205	2.6051	1.0261	0.2951	1.3211	0.0000	1,179.0969	1,179.0969	0.2322	0.0000	1,184.9022

[illegible]

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2019	3-31-2019	1.6087	1.6087
2	4-1-2019	6-30-2019	2.2845	2.2845
3	7-1-2019	9-30-2019	2.6097	2.6097
4	10-1-2019	12-31-2019	2.6066	2.6066
5	1-1-2020	3-31-2020	2.3841	2.3841
6	4-1-2020	6-30-2020	1.2940	1.2940
		Highest	2.6097	2.6097

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5960	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8600e-003	2.8600e-003	1.0000e-005	0.0000	3.0600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.5960	1.0000e-005	1.4900e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005	0.0000	2.8600e-003	2.8600e-003	1.0000e-005	0.0000	3.0600e-003

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2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5960	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8600e-003	2.8600e-003	1.0000e-005	0.0000	3.0600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.5960	1.0000e-005	1.4900e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005	0.0000	2.8600e-003	2.8600e-003	1.0000e-005	0.0000	3.0600e-003

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	5/1/2019	5	87	
2	Grading	Grading	5/1/2019	5/1/2020	5	263	
3	Building Construction	Building Construction	5/1/2020	6/30/2020	5	43	

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Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 160****Acres of Paving: 160****Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	15.00	0.00	269,628.00	10.80	7.30	5.00	LD_Mix	HDT_Mix	EMFAC_Mix
Building Construction	9	15.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7859	0.0000	0.7859	0.4320	0.0000	0.4320	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1886	1.9824	0.9597	1.6500e-003		0.1040	0.1040		0.0957	0.0957	0.0000	148.6338	148.6338	0.0470	0.0000	149.8094
Total	0.1886	1.9824	0.9597	1.6500e-003	0.7859	0.1040	0.8899	0.4320	0.0957	0.5276	0.0000	148.6338	148.6338	0.0470	0.0000	149.8094

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3.2 Site Preparation - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4100e-003	2.3500e-003	0.0238	5.0000e-005	5.2000e-003	4.0000e-005	5.2400e-003	1.3800e-003	4.0000e-005	1.4200e-003	0.0000	4.6068	4.6068	1.6000e-004	0.0000	4.6109
Total	3.4100e-003	2.3500e-003	0.0238	5.0000e-005	5.2000e-003	4.0000e-005	5.2400e-003	1.3800e-003	4.0000e-005	1.4200e-003	0.0000	4.6068	4.6068	1.6000e-004	0.0000	4.6109

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7859	0.0000	0.7859	0.4320	0.0000	0.4320	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1886	1.9824	0.9597	1.6500e-003		0.1040	0.1040		0.0957	0.0957	0.0000	148.6336	148.6336	0.0470	0.0000	149.8093
Total	0.1886	1.9824	0.9597	1.6500e-003	0.7859	0.1040	0.8899	0.4320	0.0957	0.5276	0.0000	148.6336	148.6336	0.0470	0.0000	149.8093

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3.2 Site Preparation - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4100e-003	2.3500e-003	0.0238	5.0000e-005	5.2000e-003	4.0000e-005	5.2400e-003	1.3800e-003	4.0000e-005	1.4200e-003	0.0000	4.6068	4.6068	1.6000e-004	0.0000	4.6109
Total	3.4100e-003	2.3500e-003	0.0238	5.0000e-005	5.2000e-003	4.0000e-005	5.2400e-003	1.3800e-003	4.0000e-005	1.4200e-003	0.0000	4.6068	4.6068	1.6000e-004	0.0000	4.6109

3.3 Grading - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9987	0.0000	0.9987	0.4629	0.0000	0.4629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4147	4.7705	2.9205	5.4300e-003		0.2085	0.2085		0.1918	0.1918	0.0000	487.3866	487.3866	0.1542	0.0000	491.2417
Total	0.4147	4.7705	2.9205	5.4300e-003	0.9987	0.2085	1.2072	0.4629	0.1918	0.6547	0.0000	487.3866	487.3866	0.1542	0.0000	491.2417

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3.3 Grading - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.2624	1.4728	1.8244	5.7300e-003	0.4844	7.8900e-003	0.4923	0.1270	7.4800e-003	0.1345	0.0000	529.2041	529.2041	0.0305	0.0000	529.9662
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.8600e-003	4.7300e-003	0.0479	1.0000e-004	0.0105	8.0000e-005	0.0105	2.7800e-003	7.0000e-005	2.8500e-003	0.0000	9.2665	9.2665	3.3000e-004	0.0000	9.2748
Total	0.2693	1.4775	1.8723	5.8300e-003	0.4948	7.9700e-003	0.5028	0.1298	7.5500e-003	0.1373	0.0000	538.4706	538.4706	0.0308	0.0000	539.2410

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9987	0.0000	0.9987	0.4629	0.0000	0.4629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4147	4.7705	2.9205	5.4300e-003		0.2085	0.2085		0.1918	0.1918	0.0000	487.3860	487.3860	0.1542	0.0000	491.2411
Total	0.4147	4.7705	2.9205	5.4300e-003	0.9987	0.2085	1.2072	0.4629	0.1918	0.6547	0.0000	487.3860	487.3860	0.1542	0.0000	491.2411

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3.3 Grading - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.2624	1.4728	1.8244	5.7300e-003	0.4844	7.8900e-003	0.4923	0.1270	7.4800e-003	0.1345	0.0000	529.2041	529.2041	0.0305	0.0000	529.9662
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.8600e-003	4.7300e-003	0.0479	1.0000e-004	0.0105	8.0000e-005	0.0105	2.7800e-003	7.0000e-005	2.8500e-003	0.0000	9.2665	9.2665	3.3000e-004	0.0000	9.2748
Total	0.2693	1.4775	1.8723	5.8300e-003	0.4948	7.9700e-003	0.5028	0.1298	7.5500e-003	0.1373	0.0000	538.4706	538.4706	0.0308	0.0000	539.2410

3.3 Grading - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9987	0.0000	0.9987	0.4629	0.0000	0.4629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1958	2.2087	1.4062	2.7300e-003		0.0957	0.0957		0.0880	0.0880	0.0000	239.7309	239.7309	0.0775	0.0000	241.6692
Total	0.1958	2.2087	1.4062	2.7300e-003	0.9987	0.0957	1.0944	0.4629	0.0880	0.5509	0.0000	239.7309	239.7309	0.0775	0.0000	241.6692

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3.3 Grading - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1194	0.6952	0.8207	2.8200e-003	0.4573	3.1700e-003	0.4605	0.1163	3.0000e-003	0.1193	0.0000	260.7378	260.7378	0.0141	0.0000	261.0895
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1100e-003	2.0700e-003	0.0211	5.0000e-005	5.2600e-003	4.0000e-005	5.2900e-003	1.4000e-003	3.0000e-005	1.4300e-003	0.0000	4.5163	4.5163	1.4000e-004	0.0000	4.5198
Total	0.1226	0.6973	0.8418	2.8700e-003	0.4626	3.2100e-003	0.4658	0.1177	3.0300e-003	0.1207	0.0000	265.2541	265.2541	0.0142	0.0000	265.6093

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9987	0.0000	0.9987	0.4629	0.0000	0.4629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1958	2.2087	1.4062	2.7300e-003		0.0957	0.0957		0.0880	0.0880	0.0000	239.7306	239.7306	0.0775	0.0000	241.6690
Total	0.1958	2.2087	1.4062	2.7300e-003	0.9987	0.0957	1.0944	0.4629	0.0880	0.5509	0.0000	239.7306	239.7306	0.0775	0.0000	241.6690

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3.3 Grading - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.1194	0.6952	0.8207	2.8200e-003	0.4573	3.1700e-003	0.4605	0.1163	3.0000e-003	0.1193	0.0000	260.7378	260.7378	0.0141	0.0000	261.0895
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1100e-003	2.0700e-003	0.0211	5.0000e-005	5.2600e-003	4.0000e-005	5.2900e-003	1.4000e-003	3.0000e-005	1.4300e-003	0.0000	4.5163	4.5163	1.4000e-004	0.0000	4.5198
Total	0.1226	0.6973	0.8418	2.8700e-003	0.4626	3.2100e-003	0.4658	0.1177	3.0300e-003	0.1207	0.0000	265.2541	265.2541	0.0142	0.0000	265.6093

3.4 Building Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0456	0.4125	0.3622	5.8000e-004		0.0240	0.0240		0.0226	0.0226	0.0000	49.7962	49.7962	0.0122	0.0000	50.0999
Total	0.0456	0.4125	0.3622	5.8000e-004		0.0240	0.0240		0.0226	0.0226	0.0000	49.7962	49.7962	0.0122	0.0000	50.0999

Reservoir - Tulare County, Annual

3.4 Building Construction - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3000e-004	0.0131	2.6000e-003	3.0000e-005	7.1000e-004	7.0000e-005	7.8000e-004	2.1000e-004	7.0000e-005	2.8000e-004	0.0000	2.8832	2.8832	1.3000e-004	0.0000	2.8866
Worker	1.5200e-003	1.0100e-003	0.0103	2.0000e-005	2.5700e-003	2.0000e-005	2.5900e-003	6.8000e-004	2.0000e-005	7.0000e-004	0.0000	2.2068	2.2068	7.0000e-005	0.0000	2.2085
Total	1.9500e-003	0.0141	0.0129	5.0000e-005	3.2800e-003	9.0000e-005	3.3700e-003	8.9000e-004	9.0000e-005	9.8000e-004	0.0000	5.0900	5.0900	2.0000e-004	0.0000	5.0951

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0456	0.4125	0.3622	5.8000e-004		0.0240	0.0240		0.0226	0.0226	0.0000	49.7961	49.7961	0.0122	0.0000	50.0998
Total	0.0456	0.4125	0.3622	5.8000e-004		0.0240	0.0240		0.0226	0.0226	0.0000	49.7961	49.7961	0.0122	0.0000	50.0998

Reservoir - Tulare County, Annual

3.4 Building Construction - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.3000e-004	0.0131	2.6000e-003	3.0000e-005	7.1000e-004	7.0000e-005	7.8000e-004	2.1000e-004	7.0000e-005	2.8000e-004	0.0000	2.8832	2.8832	1.3000e-004	0.0000	2.8866
Worker	1.5200e-003	1.0100e-003	0.0103	2.0000e-005	2.5700e-003	2.0000e-005	2.5900e-003	6.8000e-004	2.0000e-005	7.0000e-004	0.0000	2.2068	2.2068	7.0000e-005	0.0000	2.2085
Total	1.9500e-003	0.0141	0.0129	5.0000e-005	3.2800e-003	9.0000e-005	3.3700e-003	8.9000e-004	9.0000e-005	9.8000e-004	0.0000	5.0900	5.0900	2.0000e-004	0.0000	5.0951

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Reservoir - Tulare County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.484529	0.037408	0.169104	0.167500	0.028925	0.006640	0.020939	0.074939	0.001810	0.001483	0.004561	0.001211	0.000949

5.0 Energy Detail

 Historical Energy Use: N

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5.1 Mitigation Measures Energy

[illegible]

5.2 Energy by Land Use - NaturalGas

Unmitigated

[illegible]

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5.2 Energy by Land Use - NaturalGas**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Reservoir - Tulare County, Annual

5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5960	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8600e-003	2.8600e-003	1.0000e-005	0.0000	3.0600e-003
Unmitigated	0.5960	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8600e-003	2.8600e-003	1.0000e-005	0.0000	3.0600e-003

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6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1454					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4505					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8600e-003	2.8600e-003	1.0000e-005	0.0000	3.0600e-003
Total	0.5960	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8600e-003	2.8600e-003	1.0000e-005	0.0000	3.0600e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1454					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4505					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8600e-003	2.8600e-003	1.0000e-005	0.0000	3.0600e-003
Total	0.5960	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.8600e-003	2.8600e-003	1.0000e-005	0.0000	3.0600e-003

7.0 Water Detail

Reservoir - Tulare County, Annual

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Reservoir - Tulare County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

Reservoir - Tulare County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	-----------	-------------	-------------	-----------

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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Appendix B

Biological Evaluation



LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

**PIXLEY IRRIGATION DISTRICT
GROUNDWATER RECHARGE PROJECT
BIOLOGICAL EVALUATION
TULARE COUNTY, CALIFORNIA**

Prepared by:

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June 2018

PN 2262-01

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EXECUTIVE SUMMARY

Live Oak Associates, Inc. (LOA) conducted an investigation of the biological resources of an approximate 160-acre property (“project site”) proposed by the Pixley Irrigation District (PID) for development of a groundwater recharge basin facility (“project”), and evaluated likely impacts to such resources resulting from project development. The project will entail the construction of a two-cell recharge basin, a diversion structure on an adjacent PID canal, associated piping to enable canal water to be delivered to the basin, and an outlet canal to recycle basin water back to the existing PID canal. The site is located approximately 3 miles south of the community of Pixley in rural Tulare County, California. On April 26, 2018, LOA surveyed the project site for biotic habitats, the plants and animals occurring in those habitats, and significant habitat values that may be protected by state and federal law.

The project site consists primarily of an almond orchard at various stages of maturity. It also includes a residence, a tailwater basin, two short segments of an unnamed PID canal, and a network of unpaved roads. Five habitats/land uses were identified on the project site: orchard, ruderal, residential, tailwater basin, and irrigation canal. A mosaic of agricultural uses surround the project site, within a region dominated by similar land uses. The project site’s tailwater basin and PID canal both appear to lack full hydrological connectivity to Waters of the U.S. and therefore are not likely to, themselves, be considered Waters of the U.S.

Impacts associated with project development would be less than significant, as defined by the California Environmental Quality Act (CEQA), for special status plant species; 15 special status animal species absent from or unlikely to use the project site; wildlife movement corridors; Waters of the U.S.; and riparian or other sensitive habitats. Loss of habitat for special status animal species would also be considered less than significant under CEQA. The project does not appear to conflict with the goals and policies of the Tulare County General Plan or any other local policies.

The project has the potential to result in construction-related mortality of the San Joaquin kit fox, Bakersfield legless lizard, burrowing owl, American badger, and roosting native bats including the western mastiff bat and pallid bat, and construction-related mortality or disturbance of nesting raptors and migratory birds including the Swainson’s hawk, white-tailed kite, and loggerhead shrike. The project also has the potential to result in the degradation of water quality in Deer Creek, which adjoins the project site to the south. These impacts are all considered potentially significant under CEQA. Project avoidance of active nests, dens, and roost sites identified during preconstruction surveys; travel restrictions along the Deer Creek access road; implementation of erosion control measures and a Stormwater Pollution Prevention Plan; and implementation of minimization measures consistent with the USFWS *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* will reduce potential project impacts to biological resources to a less than significant level under CEQA, and will ensure compliance with state and federal laws.

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1.0 INTRODUCTION

Pixley Irrigation District (PID) proposes to develop a groundwater recharge facility (“project”) on an approximate 160-acre property (“project site”) located in rural Tulare County, California. The following technical report, prepared by Live Oak Associates, Inc. (LOA) in compliance with the California Environmental Quality Act (CEQA), describes the biotic resources of the project site, and evaluates potential impacts to those resources that could result from project development. The project site is located immediately west of State Route (SR) 99 and immediately south of Avenue 72, approximately 3 miles south of the community of Pixley in southwestern Tulare County (Figure 1), and can be found on the *Pixley* U.S. Geological Survey (USGS) 7.5 minute quadrangle within Sections 20 and 21 of Township 23 South, Range 25 East, Mount Diablo Base and Meridian (Figure 2).

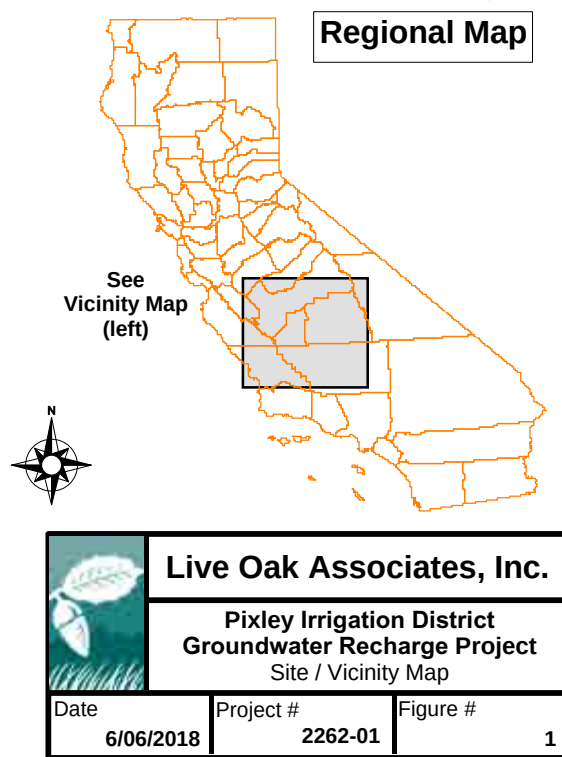
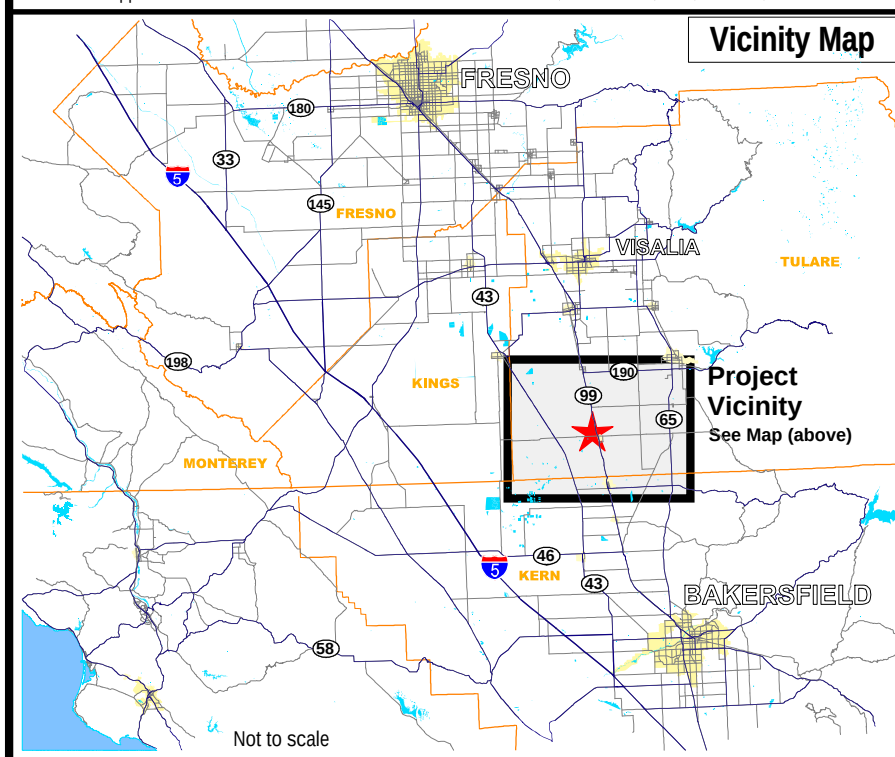
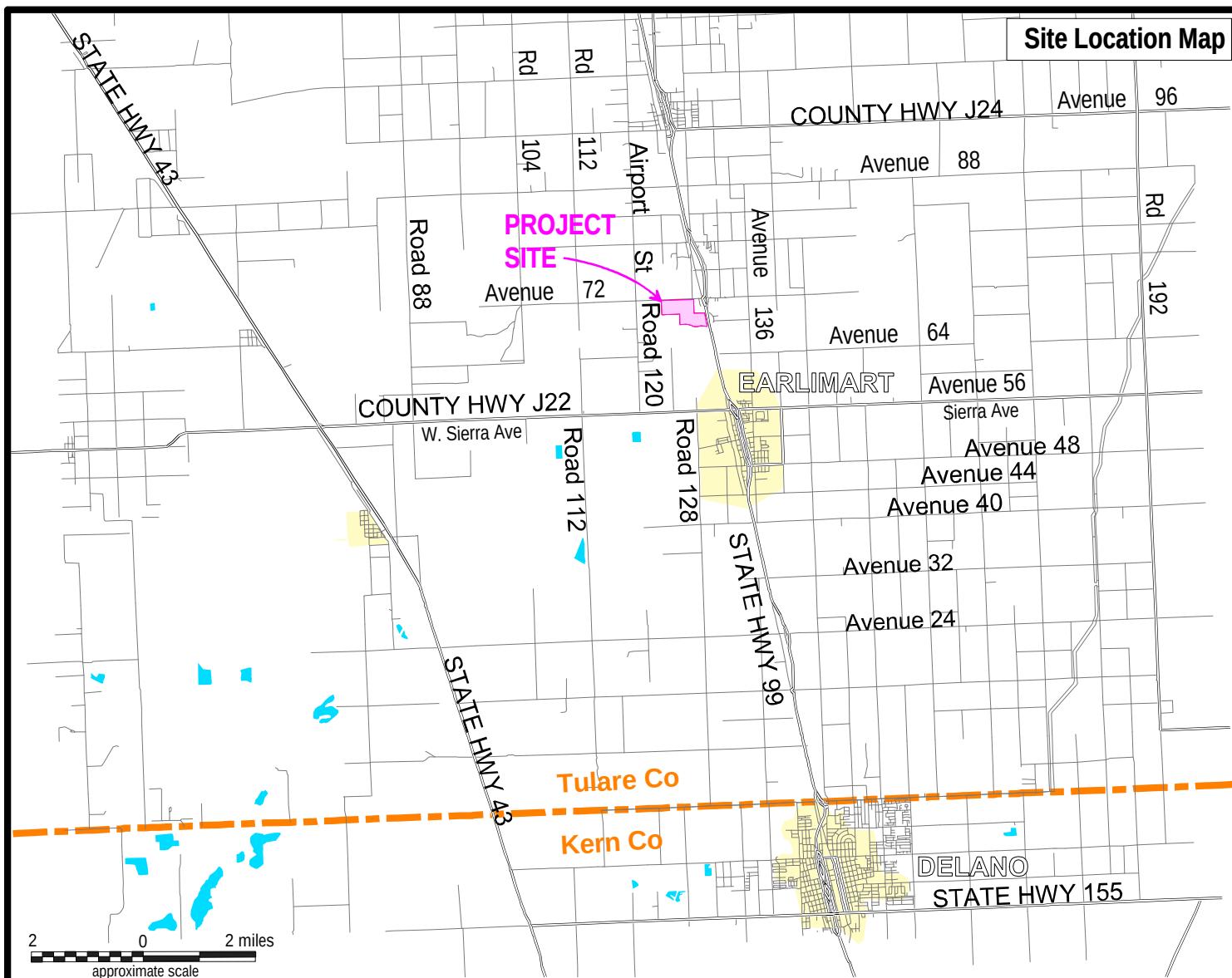
1.1 PROJECT DESCRIPTION

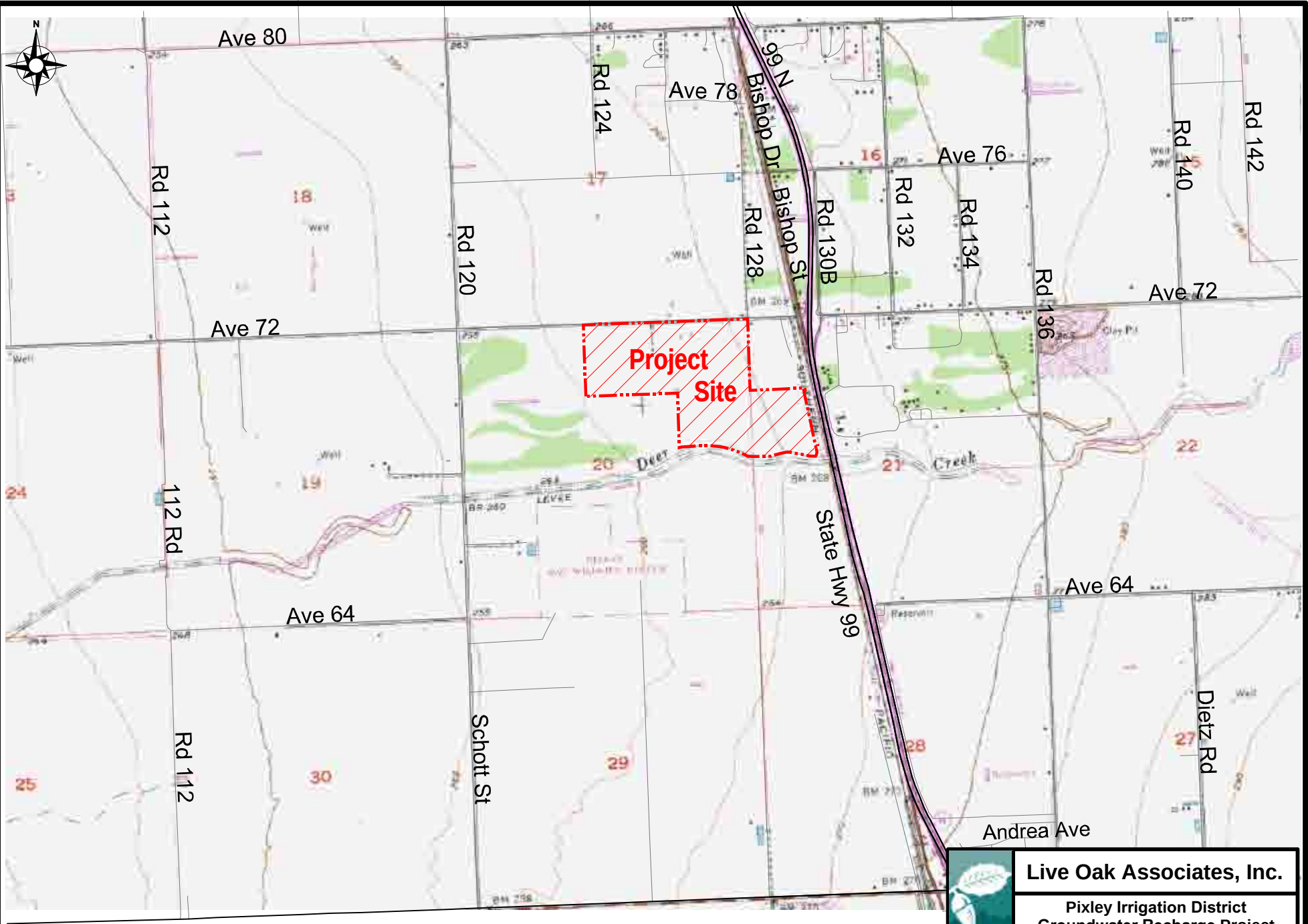
The project will involve the construction of a groundwater recharge basin and associated infrastructure to enable waters from an existing PID canal to be diverted into the proposed basin during wet years. The proposed basin is to be composed of two cells totaling approximately 160 acres. The cells will be approximately 5-15 feet deep and piping will be used to connect the cells in order to equalize water levels.

A diversion structure will be constructed on an existing PID canal that runs from south to north between the subject property and SR 99. The diversion structure will be located immediately east of the southern basin cell’s southeastern corner, and will be connected to that cell with a short section of piping. The basin complex will likely have a looped recharge system, with approximately 1,000 linear feet of new canal channel to be constructed along the northern margin of the southern cell to tie back into the existing PID canal. The outlet back into the canal will be located immediately east of the southern cell’s northeastern corner.

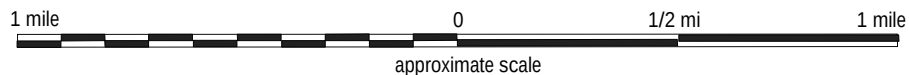
1.2 REPORT OBJECTIVES

Construction of groundwater recharge facilities may damage or modify sensitive biological resources, including habitats used by sensitive plant and wildlife species. In such cases, site





From USGS
Pixley 7.5' Quadrangle 1969



	Live Oak Associates, Inc.		
	Pixley Irrigation District Groundwater Recharge Project		
	U.S.G.S. Quadrangle		
Date	Project #	Figure #	
6/06/2018	2262-01	2	

development may be regulated by state or federal agencies, subject to provisions of the California Environmental Quality Act (CEQA), and/or covered by county policies and ordinances. This report addresses issues related to: 1) sensitive biological resources occurring, or potentially occurring, on the project site; 2) the federal, state, and local laws regulating such resources; and 3) mitigation measures that may be required to reduce the magnitude of anticipated impacts and/or comply with permit requirements of state and federal resource agencies. As such, the objectives of this report are to:

- Summarize all site-specific information related to existing biological resources;
- Make reasonable inferences about the biological resources that could occur on-site based on habitat suitability and the proximity of the site to a species' known range;
- Summarize all state and federal natural resource protection laws that may be relevant to possible future site development;
- Identify and discuss project impacts to biological resources likely to occur on the site within the context of CEQA or any state or federal laws; and
- Identify avoidance and mitigation measures that would reduce impacts to a less-than-significant level (as identified by CEQA) and are generally consistent with recommendations of the resource agencies for affected biological resources.

1.3 STUDY METHODOLOGY

A reconnaissance-level field survey of the project site was conducted on April 26, 2018 by Live Oak Associates, Inc. (LOA) biologist Rebekah Jensen. The surveys consisted of walking through the project site while identifying the principal land uses and biotic habitats of the site, identifying plant and animal species encountered, and assessing the suitability of the site's habitats for special-status species.

LOA conducted an analysis of potential project impacts based on the known and potential biotic resources of the project site. Sources of information used in the preparation of this analysis included: (1) the *California Natural Diversity Data Base* (CDFW 2018), (2) the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2018), and (3) manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

Focused surveys for sensitive biological resources were not conducted for this study. The field survey conducted for this study was sufficient to assess the significance of possible biological impacts associated with development of the project site and to assess the need for more detailed surveys.

2.0 EXISTING CONDITIONS

2.1 REGIONAL SETTING

The project site is located in the southern San Joaquin Valley. The San Joaquin Valley is bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coastal ranges to the west, and the Sacramento-San Joaquin Delta to the north.

Like most of California, the southern San Joaquin Valley (and the project site) experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures commonly exceed 90 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures rarely exceed 70 degrees Fahrenheit, with daytime highs often below 60 degrees Fahrenheit. Annual precipitation in the vicinity of the project site is about 9 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain.

The principal drainage of the project vicinity is Deer Creek, which flows from east to west immediately to the south of the project site. Deer Creek originates in the Greenhorn Mountains of the Sierra Nevada, some 40 miles east of the project site, at an elevation of approximately 7,500 feet. It enters the San Joaquin Valley near Terra Bella, and flows through the valley for approximately 30 miles, feeding a series of irrigation ditches and canals along the way. Its channel in the valley is highly modified, having been realigned, reinforced with levees, and largely cleared of the riparian vegetation it once supported.

The project site is situated within a matrix of largely agricultural lands. It is bordered to the north by almond orchards and vineyards, and to the east by vineyards and the SR 99 transportation corridor. It is bordered to the south by Deer Creek and, beyond that, pistachio and almond orchards. It is bordered to the west by almond orchards.

2.2 PROJECT SITE

The project site consists of an almond orchard at various stages of maturity, a residence, a network of unpaved roads, a tailwater basin, and two short segments of a PID canal. The

topography of the site is relatively level, ranging from 250 to 260 feet National Geodetic Vertical Datum (NGVD).

Two soil mapping units representing two soil series were identified on the project site: Hanford sandy loam, 0 to 2 percent slopes, and Akers-Akers, saline-Sodic, complex, 0 to 2 percent slopes. Of these, the Akers-Akers mapping unit is considered hydric. Hydric soils are defined as saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions such that under sufficiently wet conditions hydrophytic vegetation is supported. However, due to long-term management, soils of the site exhibited no characteristics of hydric soils.

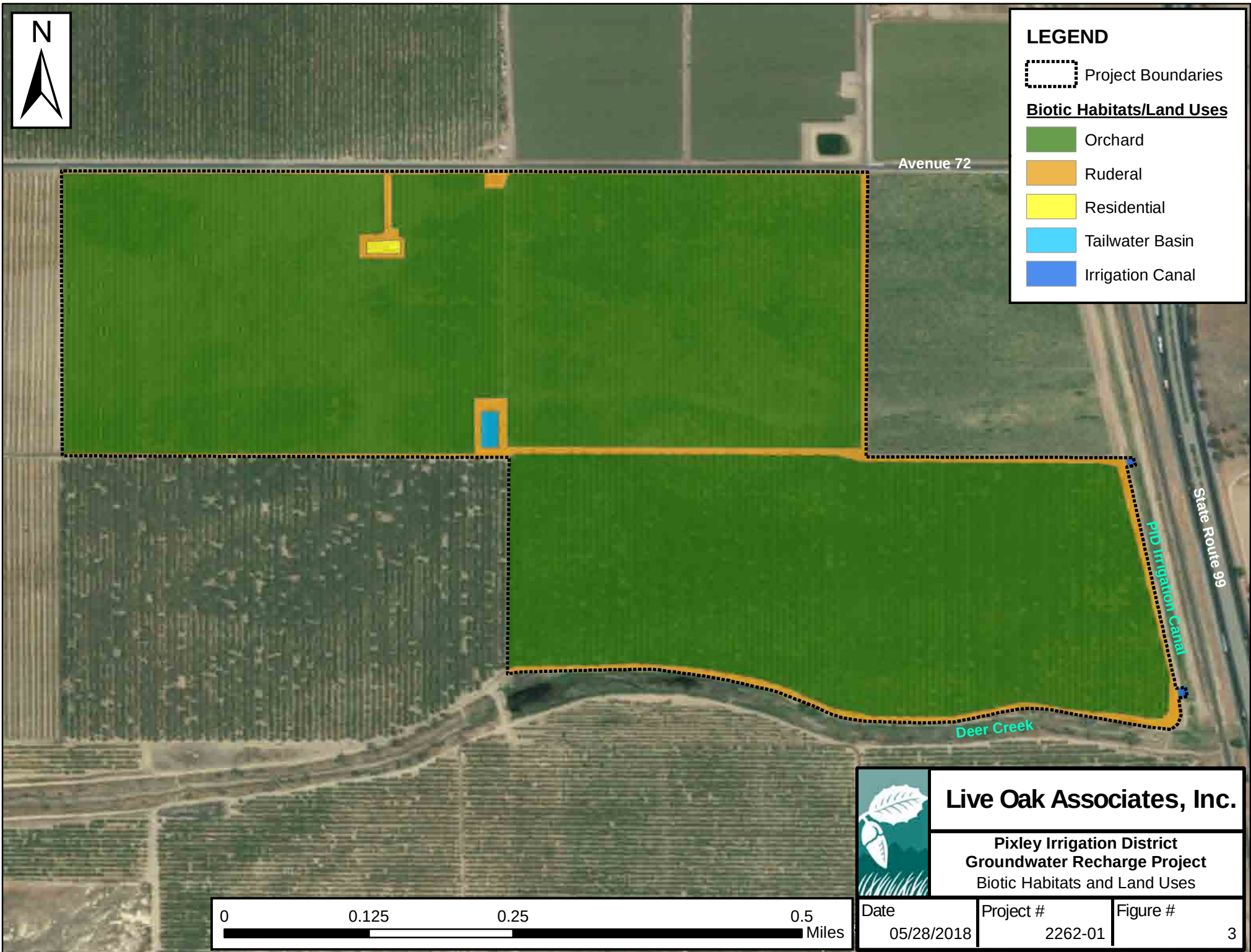
2.3 BIOTIC HABITATS/LAND USES

Five biotic habitats / land use types were identified on the project site during the field survey: orchard, ruderal, residential, tailwater basin, and irrigation canal (Figure 3). These habitats / land uses and their constituent plant and animal species are described in more detail in the following sections. A list of the vascular plant species observed within the project site and the terrestrial vertebrates using, or potentially using, the site's habitats are provided in Appendices A and B, respectively. Selected photographs of the project site are presented in Appendix C.

2.3.1 Orchard

At the time of the field survey, the project site consisted primarily of almond orchard. The northerly portion of the orchard was fairly young, while the southerly portion contained large, senescent trees near the end of their productive life. The older portion had a closed canopy and was almost entirely barren in the understory, save sporadic weeds such as mallow (*Malva* sp.) and white-stemmed filaree (*Erodium moschatum*). The younger portion had a relatively open canopy; the sunny gaps between the trees supported common chickweed (*Stellaria media*), Canadian horseweed (*Erigeron canadensis*), and other common weeds.

Due to intensive disturbance and the lack of aquatic habitat, orchards provide marginal habitat for amphibians; however, Pacific tree frogs (*Pseudacris regilla*) and western toads (*Bufo boreas*) may disperse through these lands during the winter and spring. Common reptiles such as the



western fence lizard (*Sceloporus occidentalis*), Pacific gopher snake (*Pituophis catenifer catenifer*), and California kingsnake (*Lampropeltis californiae*) may occasionally occur in the orchards of the project site, especially where the trees are younger and sunshine more abundant.

Orchards provide foraging and nesting habitat for a number of avian species. The project site's mature almond trees could be used for nesting by the American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*), and western kingbird (*Tyrannus verticalis*). Winter migrants such as the white-crowned sparrow (*Zonotrichia leucophrys*) may forage on dormant buds in the orchards, while resident birds such as the house finch (*Haemorrhous mexicanus*) would be expected to forage on ripening fruit.

A few small mammal species would be expected to occur within the orchards of the project site. These include deer mice (*Peromyscus maniculatus*), California voles (*Microtus californicus*), Botta's pocket gophers (*Thomomys bottae*), Audubon's cottontail (*Sylvilagus audubonii*), and black-tailed hare (*Lepus californicus*). At the time of the field survey, a black-tailed hare was observed in the orchard, and gopher burrows were relatively prevalent in the younger portion of the orchard. Various species of bat may forage over the project site's orchard habitat for flying insects, or glean insects from the leaves of trees.

Foraging raptors and mammalian predators may occur in the orchards of the project site from time to time. Raptors adapted to hunt within the tree canopy such as Cooper's hawks (*Accipiter cooperii*) and sharp-shinned hawks (*Accipiter striatus*) may forage for small birds in orchards. Mammalian predators potentially occurring in the orchards of the project site are expected to include raccoons (*Procyon lotor*) and red foxes (*Vulpes vulpes*).

2.3.2 Ruderal

Ruderal (disturbed) areas consisted of the roads and road margins of the project site, the perimeter of the tailwater basin, and a cleared area associated with a well and other agricultural infrastructure. At the time of the field survey, ruderal areas of the project site were either barren or sparsely vegetated with common weed species such as Bermuda grass (*Cynodon dactylon*) and puncturevine (*Tribulus terrestris*).

Although the wildlife habitat value of the project site's ruderal lands is relatively low, these lands certainly support some wildlife species. The reptile and amphibian species listed for orchards could potentially use ruderal habitats of the project site, as well. Mourning doves and northern mockingbirds (*Mimus polyglottos*) could be expected to occur on these ruderal lands, as could the disturbance-tolerant killdeer (*Charadrius vociferous*), which often nests on gravel or bare ground. Common raptors such as the red-tailed hawk (*Buteo jamaicensis*) and American kestrel (*Falco sparverius*) may occasionally fly over the site's ruderal areas in search of small vertebrate and invertebrate prey.

Small mammals that would be expected to occur on ruderal lands of the project site include Botta's pocket gophers, deer mice, California voles, California ground squirrels (*Otospermophilus beecheyi*), and house mice (*Mus musculus*). Mammalian predators with the potential to occur on ruderal lands of the project site include disturbance-tolerant species such as the raccoon, red fox, and coyote (*Canis latrans*).

2.3.3 Residential

The project site contained one residence. It was situated in a clearing within the almond orchard, approximately 300 feet south of Avenue 72. The residence included a home, an outbuilding, animal enclosures, and compacted dirt surfaces surrounding all of the structures. Landscaping was minimal, consisting of a single fan palm (*Washingtonia* sp.) and several ornamental shrubs. At the time of the field survey, the residence appeared to be vacant.

The project site's residence offers limited wildlife habitat owing to its lack of vegetation and highly disturbed nature. However, several animal species adapted to human disturbance have the potential to occur here. Amphibians such as Pacific tree frogs and western toads might disperse across the residential area during the winter and spring, and reptiles such as the western fence lizard and common garter snake could forage in this land use type. Buildings and other human-made structures provide potential nesting habitat for the house finch and black phoebe (*Sayornis nigricans*), as well as several non-native birds including the house sparrow (*Passer domesticus*), and Eurasian collared dove (*Streptopelia decaocto*). Mammal species attracted to residential areas include the house mouse, Virginia opossum, and Norway rat (*Rattus norvegicus*).

2.3.4 Tailwater Basin

The project site included a small tailwater basin, located at the northwest corner of the Avenue 70 and Road 126 alignments. At the time of the field survey, the basin was inundated to a depth of approximately six feet near its center. The lower banks were sparsely vegetated with bog yellow cress (*Rorippa palustris*) and shepherd's purse (*Capsella bursa-pastoris*), while the upper banks were unvegetated.

Wildlife use of the tailwater basin would vary depending on the timing and degree to which the basin is inundated or saturated. During periods of inundation, Pacific tree frogs and western toads could opportunistically breed in the basin and subsequently disperse through surrounding lands. During dry periods, reptile use of the basin would be similar to that described for other land use types of the project site.

Birds expected to use the basin during periods of inundation may include the great blue heron (*Ardea herodias*) and great egret (*Ardea alba*), assuming amphibian and/or invertebrate prey is present. Black phoebes may glean insects from the surface of the water, or extract mud from the banks for nest-building. When the basin is saturated but not inundated, avian use may include those species that feed on mudflats, such as the killdeer. When the basin is dry, avian use would be similar to that described for ruderal habitats of the project site.

Periodic inundation likely precludes occupation of the basin floor by burrowing rodents; however, deer mice and western harvest mice (*Reithrodontomys megalotis*) could inhabit the margins of the basin and could forage for insects, seeds, and plant parts in the basin when dry. Mammalian predator and raptor use of the basin would be similar to that described for other habitats of the project site.

2.3.5 Irrigation Canal

The project site contains two short segments of an unnamed PID irrigation canal. The canal was flowing at the time of the field surveys. Analysis of historical aerial imagery indicates it is not perennially inundated, however. The canal has earthen bed and banks, and appears regularly maintained. At the time of the field survey, it was primarily barren of vegetation.

Due to intensive maintenance practices, the project site's irrigation canal would be of limited value to native wildlife. However, the Pacific chorus frog and western toad may breed in the canal during periods of inundation, incidentally attracting predatory wading birds such as the great blue heron and great egret. Black phoebes may hunt insects in flight over the canal, or glean prey from the surface of the water. Black phoebes and cliff swallows (*Petrochelidon pyrrhonata*) may also use the canal as a source of mud for their nests. Fossorial rodents including the Botta's pocket gopher and California ground squirrel may burrow in the banks of the canal.

2.4 SPECIAL STATUS PLANTS AND ANIMALS

Several species of plants and animals within the state of California have low populations and/or limited distributions. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2, state and federal laws have provided the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as "threatened" or "endangered" under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered. Collectively, these plants and animals are referred to as "special status species."

The California Natural Diversity Data Base (CNDDB) (CDFW 2018) was queried for special status species occurrences in the nine USGS 7.5 minute quadrangles containing and immediately surrounding the project site (*Pixley, Taylor Weir, Tipton, Woodville, Sausalito School, Delano East, Delano West, Allensworth, and Alpaugh*). These species, and their potential to occur within the project site, are listed in Table 1 on the following pages. Sources of information for this table included the CNDDB, *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1988), and the *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2018).

Special status species occurrences within 3.1 miles (5 kilometers) of the project site are depicted in Figure 4a and 4b, and San Joaquin kit fox (*Vulpes macrotis mutica*) occurrences within 10 miles of the project site are depicted in Figure 5.



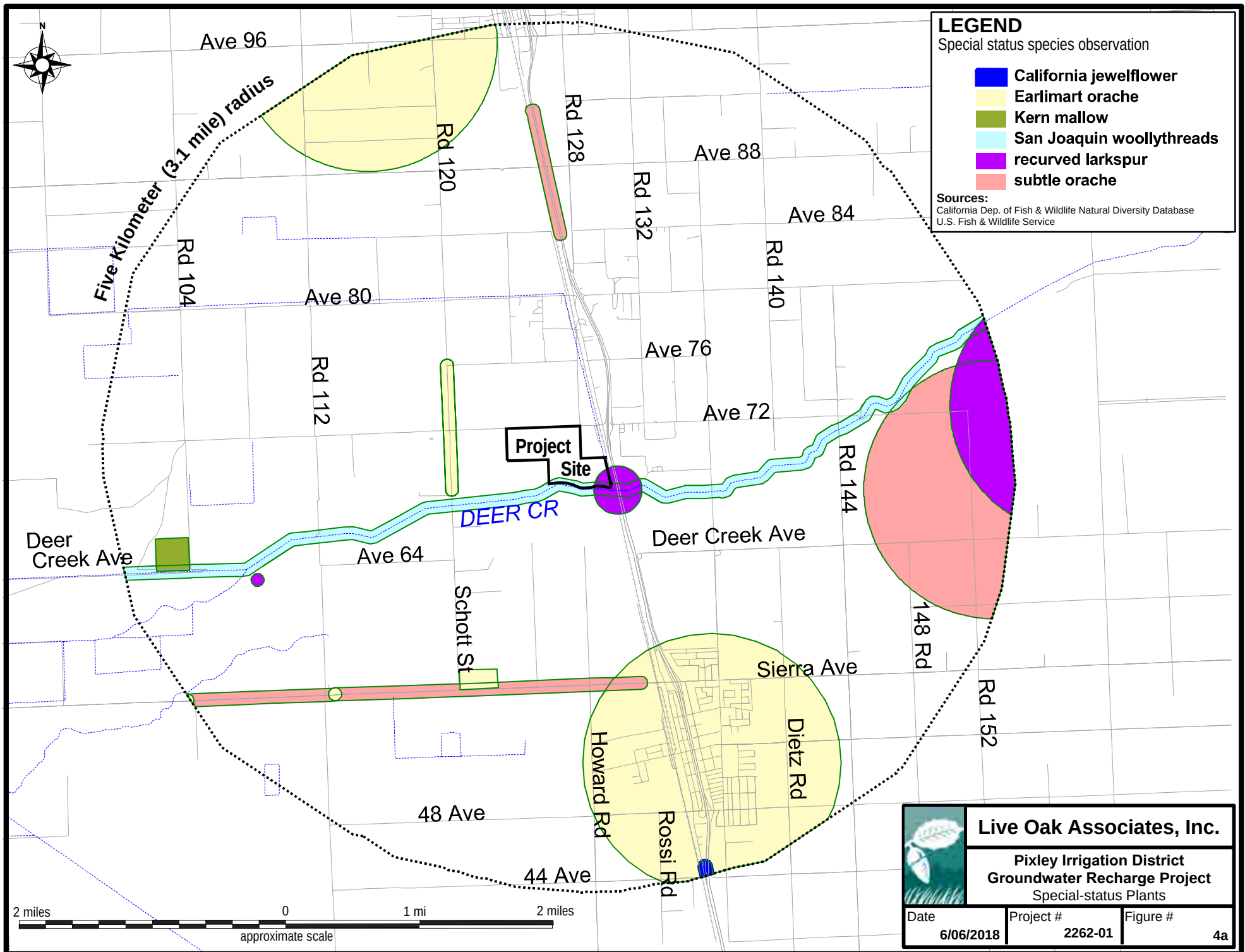
LEGEND

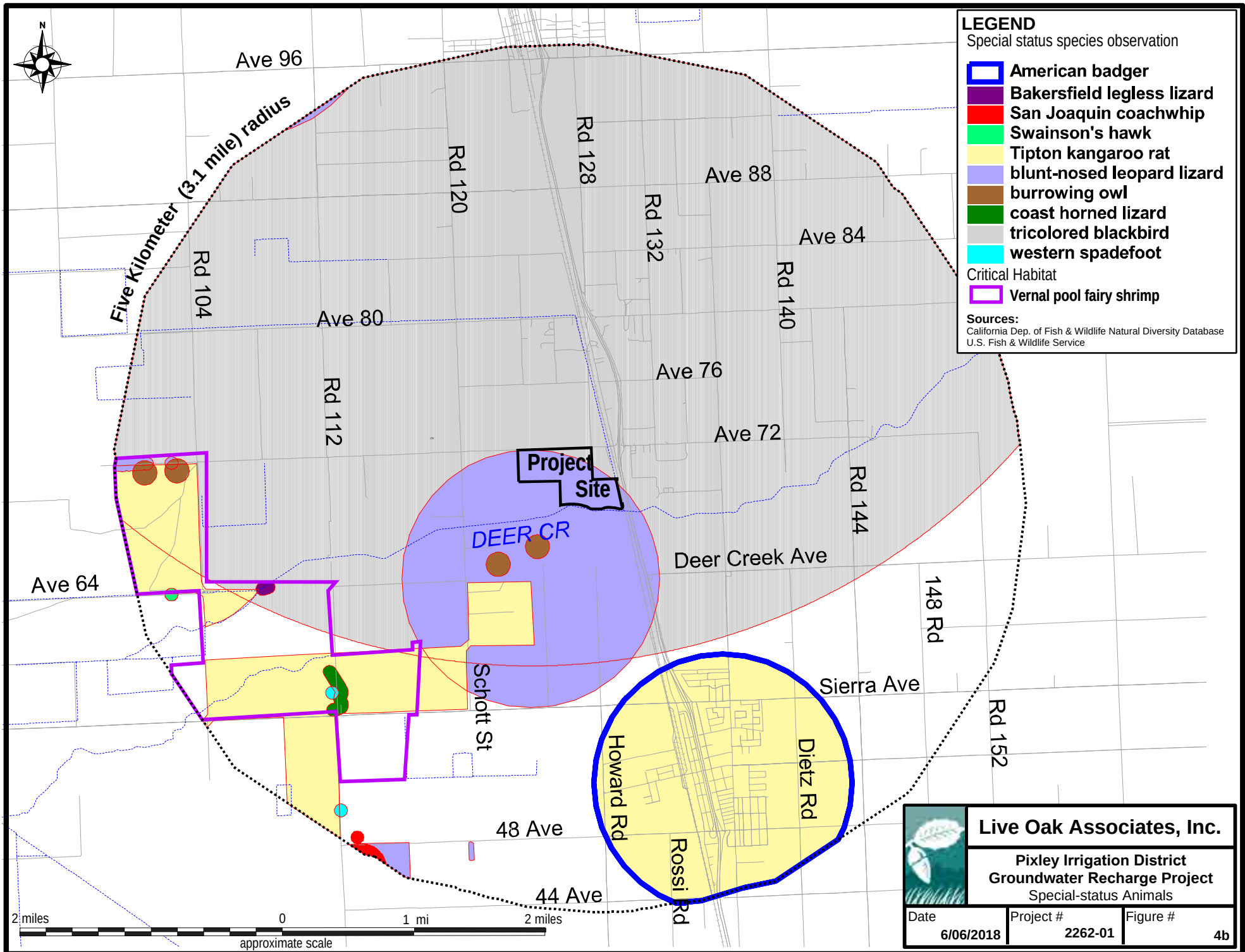
Special status species observation

- California jewelflower
- Earlimart orache
- Kern mallow
- San Joaquin woollythreads
- recurved larkspur
- subtle orache

Sources:

California Dep. of Fish & Wildlife Natural Diversity Database
U.S. Fish & Wildlife Service





LEGEND

Special status species observation

- American badger
- Bakersfield legless lizard
- San Joaquin coachwhip
- Swainson's hawk
- Tipton kangaroo rat
- blunt-nosed leopard lizard
- burrowing owl
- coast horned lizard
- tricolored blackbird
- western spadefoot

Critical Habitat

- Vernal pool fairy shrimp

Sources:

California Dept. of Fish & Wildlife Natural Diversity Database
U.S. Fish & Wildlife Service



Live Oak Associates, Inc.

**Pixley Irrigation District
Groundwater Recharge Project
Special-status Animals**

Date
6/06/2018

Project #
2262-01

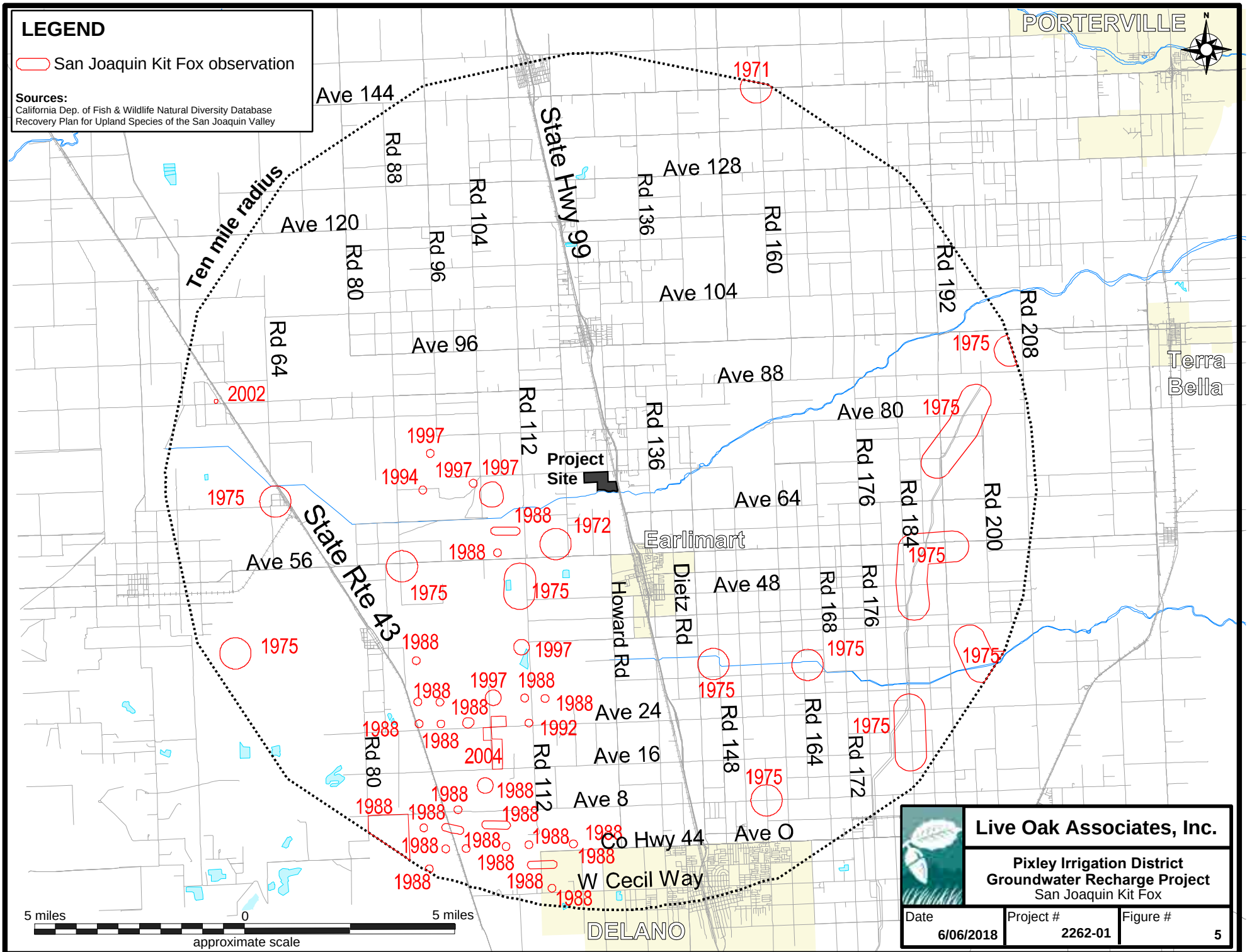
Figure #
4b

LEGEND

 San Joaquin Kit Fox observation

Sources:

California Dep. of Fish & Wildlife Natural Diversity Database
Recovery Plan for Upland Species of the San Joaquin Valley



Live Oak Associates, Inc.

**Pixley Irrigation District
Groundwater Recharge Project
San Joaquin Kit Fox**

Date	Project #	Figure #
6/06/2018	2262-01	5

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

PLANTS (adapted from CDFW 2018 and CNPS 2018)

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

Species	Status	Habitat	Occurrence on the Project Site
California Jewelflower (<i>Caulanthus californicus</i>)	FE, CE	Occurs in chenopod scrub, pinyon and juniper woodland, and sandy valley and foothill grassland; blooms February–May; elevation 250-3,300 ft.	Absent. Suitable habitat for this species is absent from the project site.
Kern Mallow (<i>Eremalche kernensis</i>)	FE, CNPS 1B	Occurs in chenopod scrub and valley and foothill grassland between 230 and 4,200 feet in elevation. Blooms March – May.	Absent. Suitable habitat for this species is absent from the project site.
San Joaquin Woollythreads (<i>Monolopia congdonii</i>)	FE CNPS 1B	Occurs in chenopod scrub and valley and foothill grassland habitats between 200 and 2,600 feet in elevation. Blooms February-May.	Absent. Suitable habitat for this species is absent from the project site.

CNPS-Listed Plants

Earlimart Orache (<i>Atriplex cordulata</i> var. <i>erecticaulis</i>)	CNPS 1B	Occurs in valley and foothill grassland between 130 and 330 ft. in elevation; blooms August-September.	Absent. Suitable habitat for this species is absent from the project site.
Lost Hills Crownscale (<i>Atriplex coronata</i> var. <i>vallicola</i>)	CNPS 1B	Found in chenopod scrub and valley and foothill grasslands; alkaline soils; blooms April-August; elevations below 2,080 ft.	Absent. Suitable habitat for this species is absent from the project site.
Brittlescale (<i>Atriplex depressa</i>)	CNPS 1B	Occurs in relatively barren areas with alkaline clay soils in chenopod scrub, playas, grasslands, and vernal pools of the Central Valley; blooms April-October; elevations below 1,050 ft.	Absent. Suitable habitat for this species is absent from the project site.
Vernal Pool Smallscale (<i>Atriplex persistens</i>)	CNPS 1B	Occurs in alkaline vernal pools; blooms July-Oct.; elevations below 400 ft.	Absent. Vernal pool habitat is absent from the project site.
Subtle Orache (<i>Atriplex subtilis</i>)	CNPS 1B	Occurs in valley and foothill grassland; blooms August-October; elevation 130-330 ft.	Absent. Suitable habitat for this species is absent from the project site.
Alkali Mariposa-Lily (<i>Calochortus striatus</i>)	CNPS 1B	Found in chaparral, chenopod scrub, and meadows and seeps; alkaline soils; blooms April-June; elevations below 5,000 ft.	Absent. Suitable habitat for this species is absent from the project site.
Recurved Larkspur (<i>Delphinium recurvatum</i>)	CNPS 1B	Occurs on alkaline soils in chenopod scrub, cismontane woodland, and grasslands; blooms March-June; elevations below 2,500 ft.	Absent. Suitable habitat for this species is absent from the project site.
Spiny-Sepaled Button Celery (<i>Eryngium spinoseplum</i>)	CNPS 1B	This annual/perennial occurs in vernal pools and valley and foothill grasslands of the San Joaquin Valley and the Tulare Basin; blooms April-May; elevation 330-840 ft.	Absent. Suitable habitat for this species is absent from the project site.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

PLANTS (adapted from CDFW 2018 and CNPS 2018)

CNPS-Listed Plants

Species	Status	Habitat	Occurrence on the Project Site
Coulter's Goldfields (<i>Lasthenia glabrata</i> spp. <i>coulteri</i>)	CNPS 1B	Occurs in alkaline soils of playas and vernal pools; blooms February-June; elevations below 4,000 ft.	Absent. Suitable habitat for this species is absent from the project site.
California Alkali Grass (<i>Puccinellia simplex</i>)	CNPS 1B	Occurs in alkali sinks and flats within grassland and chenopod scrub habitats of the Central Valley; elevations below 3,000 feet. Blooms March-May.	Absent. Suitable habitat for this species is absent from the project site.

ANIMALS (adapted from CDFW 2018)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act, or as California Fully Protected

Vernal Pool Fairy Shrimp (<i>Branchinecta lynchi</i>)	FT	Occurs in vernal pools, clear to tea-colored water in grass or mud-bottomed swales, and basalt pools.	Absent. Vernal pool habitat for this species is absent from the project site and adjacent lands.
Blunt-Nosed Leopard Lizard (BNLL) (<i>Gambelia sila</i>)	FE, CE, CFP	Occurs in semiarid grasslands, alkali flats, and washes. Avoids densely vegetated areas. Inhabits the San Joaquin Valley and adjacent valleys and foothills north to southern Merced County.	Absent. Any potential blunt-nosed leopard lizard habitat that may have once been present on site has been eliminated through intensive agricultural uses. The closest known occurrence of BNLL was recorded approximately 0.5 mile southwest of the site in 1974, in the grasslands of the Dickey Tract of the Pixley National Wildlife Refuge (NWR).
Swainson's Hawk (<i>Buteo swainsoni</i>)	CT	This breeding-season migrant to California nests in mature trees in riparian areas and oak savannah, and occasionally in lone trees at the margins of agricultural fields. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	Unlikely. The project site is unlikely to be used by the Swainson's hawk because it lacks suitable nesting and foraging habitat for this species. Although the mature riparian trees immediately adjacent to the site along Deer Creek are structurally suitable for nesting, Swainson's hawks usually nest adjacent to foraging habitat. Deer Creek in the project vicinity is flanked by almond and pistachio orchards, both of which are unsuitable for foraging by this species. The CNDDDB lists 4 nesting occurrences of Swainson's hawk within 5 miles of the site, all recorded in 2016 along Deer Creek where the creek fronts the grassland habitats of the Pixley NWR.
White-Tailed Kite (<i>Elanus leucurus</i>)	CFP	Occurs in savanna, open woodlands, marshes, desert grassland, and cultivated fields. Prefer lightly grazed or ungrazed fields for foraging.	Unlikely. The project site is unlikely to be used by the white-tailed kite because it does not offer nesting or foraging habitat for this species. However, kites have some potential to nest in the mature riparian trees immediately adjacent to the site along Deer Creek.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS – cont’d.

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act, or as California Fully Protected

Species	Status	Habitat	Occurrence on the Project Site
Tricolored Blackbird (<i>Agelaius tricolor</i>)	CCE	Nests colonially near fresh water in dense cattails or tules, or in thickets of willows or shrubs. In the San Joaquin Valley, has increasingly been documented nesting in wheat fields. Forages in grassland and cropland areas.	Unlikely. The project site does not contain suitable nesting or foraging habitat for this species. The closest known occurrence of tricolored blackbird was a breeding colony in cattail marsh mapped generally to Pixley in 1935; the marsh habitat has since been lost and the colony is considered extirpated.
Western Snowy Plover (<i>Charadrius alexandrinus nivosus</i>)	FT, CSC	In the San Joaquin Valley, breeds and forages in association with alkali habitats including evaporation ponds and alkali lakes and flats. Has also been documented wintering at evaporation ponds in the San Joaquin Valley.	Unlikely. The project site does not contain suitable habitat for this species. The nearest nesting occurrence of this species was recorded in 1987 approximately 12 miles west of the site, in association with a system of agricultural evaporation ponds.
Nelson’s Antelope Squirrel (<i>Ammospermophilus nelsoni</i>)	CT	Occurs in the San Joaquin Valley in broken terrain with small gullies and washes. Suitable habitats include widely spaced alkali scrub and annual grassland.	Absent. Any potential Nelson’s antelope squirrel habitat that may have once been present on site has been eliminated through intensive agricultural uses. The closest known occurrence of this species was recorded approximately 6 miles southwest of the site in 1991.
Tipton Kangaroo Rat (<i>Dipodomys nitratoideus nitratoideus</i>)	FE, CE	Occupies underground burrows in valley saltbush scrub and valley sink scrub habitats in the southern San Joaquin Valley.	Absent. Any potential Tipton’s kangaroo rat habitat that may have once been present on site has been eliminated through intensive agricultural uses. The closest known occurrence of this species was recorded approximately 2 miles southeast of the site in 1927, but that population has since been extirpated. The only other nearby occurrence is located approximately 2.5 miles southwest of the site in grassland habitat adjacent to the Pixley NWR.
San Joaquin Kit Fox (SJKF) (<i>Vulpes macrotis mutica</i>)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged California ground squirrel burrows as denning habitat. Typical dens have openings 5 to 8 inches in diameter.	Possible. Intensive agricultural practices make kit fox occupation of the project site unlikely. However, individual SJKF may pass through or forage on the site from time to time, and ruderal areas could potentially be used for denning. The CNDDDB lists 36 occurrences of SJKF within 10 miles of the site. Most were recorded in grassland or scrub habitats, and all but 7 are from 20 or more years ago. The most recent was documented in 2004, in alkali sink approximately 6 miles southwest of the site.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS – cont’d.

State Species of Special Concern

Species	Status	Habitat	Occurrence on the Project Site
Kern Brook Lamprey (<i>Entosphenus hubbsi</i>)	CSC	Requires perennial waters. Occurs in the Friant-Kern Canal and the lower Merced, Kaweah, Kings, and San Joaquin Rivers.	Absent. Perennial waters required by this species are absent from the project site.
Western Spadefoot (<i>Spea hammondi</i>)	CSC	Mainly occurs in grasslands of San Joaquin Valley. Vernal pools or other temporary wetlands are required for breeding. Aestivates in underground refugia such as rodent burrows, typically within 1,200 ft. of aquatic habitat.	Absent. Wetland habitat suitable for breeding by the western spadefoot is absent from the project site and adjacent lands. The closest known breeding occurrence was recorded in vernal pool/grassland habitat approximately 2 miles southwest of the site in 1992.
Bakersfield Legless Lizard (<i>Anniella grinnelli</i>)	CSC	Occurs in moist, loose soil with plant cover, in habitats ranging from chaparral to desert scrub to riparian stream terraces. Leaf litter under trees and shrubs indicate suitable habitat. Often found under surface objects such as rocks and logs.	Possible. This species could potentially occur in the Deer Creek corridor immediately adjacent to the project site, and bask on the access road along the site’s southern boundary. The closest known occurrence was a 2017 sighting approximately 2 miles southwest of the site, on a dirt road fronting Deer Creek.
Coast Horned Lizard (<i>Phrynosoma blainvillii</i>)	CSC	Occurs in the lower Sierra foothills and throughout the central and southern California coast in relatively open areas.	Unlikely. The site does not contain suitable habitat for the coast horned lizard. The closest known occurrence of this species was documented in grassland habitat approximately 2 miles southwest of the site in 1992.
San Joaquin Coachwhip (<i>Coluber flagellum ruddocki</i>)	CSC	Occurs in open, dry areas including grassland and saltbush scrub. Takes refuge in rodent burrows and under shaded vegetation.	Unlikely. The site does not contain suitable habitat for the San Joaquin coachwhip. The closest known occurrence of this species was documented at the Allensworth Ecological Reserve approximately 3 miles southwest of the site in 1992.
Northern Harrier (<i>Circus cyaneus</i>)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands. Nests on ground, generally in marsh habitat, although grassland, pasture, and cultivated fields may be used.	Unlikely. The project does not contain habitat likely to be used for foraging by this species, and nesting habitat is absent.
Mountain Plover (<i>Charadrius montanus</i>)	CSC	This species is a winter resident of California’s Central and Imperial Valleys, where it forages in short grasslands and freshly plowed fields. Breeds in the western Great Plains and Rocky Mountain states.	Absent. Suitable habitat for this species is absent from the project site.

TABLE 1. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS – cont’d.

State Species of Special Concern

Species	Status	Habitat	Occurrence on the Project Site
Burrowing Owl (<i>Athene cunicularia</i>)	CSC	Frequents open, dry annual or perennial grasslands, deserts, and scrublands characterized by low growing vegetation. Dependent upon burrowing mammals, most notably the California ground squirrel, for nest burrows.	Possible. The project site consists almost entirely of orchard habitat unsuitable for the burrowing owl. However, it is conceivable that burrowing owls could nest or roost in California ground squirrel burrows in open areas of the site, particularly on the banks of the site’s tailwater basin and PID irrigation canal. Burrowing owls have been documented in the grassland habitats of the Dickey Tract of the Pixley NWR, approximately 0.3 and 0.6 mile southwest of the project site; both occurrences are from 1993.
Loggerhead Shrike (<i>Lanius ludovicianus</i>)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. In the Central Valley, nests in riparian areas, desert scrub, and agricultural hedgerows.	Unlikely. The project site is unlikely to be used by the loggerhead shrike because it lacks suitable nesting and foraging habitat for this species. However, shrikes could conceivably nest immediately adjacent to the site in the riparian trees and shrubs lining Deer Creek.
Pallid Bat (<i>Antrozous pallidus</i>)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally take insects in flight. Prefers to roost in rock crevices, but may also use tree cavities, caves, bridges, and buildings.	Possible. The pallid bat has the potential to forage over the site from time to time, and could roost in the site’s residential structures. The CNDDB lists no occurrences of this species within 20 miles of the project site, however.
Western Mastiff Bat (<i>Eumops perotis</i> ssp. <i>californicus</i>)	CSC	Found in open, arid to semi-arid habitats, where it feeds on insects in flight. Roosts most commonly in crevices in cliff faces, but may also use high buildings, trees, and tunnels.	Possible. Individuals of this species could potentially roost the site’s residential structures, and could forage in or over other habitats of the site. The CNDDB lists no occurrences of this species within a 20-mile radius of the project site, however.
American Badger (<i>Taxidea taxus</i>)	CSC	Uncommon resident statewide; most abundant in drier open stages of most shrub, forest, and herbaceous habitats.	Possible. Badgers are not typically associated with orchard habitat, which accounts for the vast majority of the project site. However, badgers may pass through or forage on the site from time to time, and could potentially den in the site’s ruderal areas. The closest known occurrence was generally mapped to Earlimart, approximately 2 miles southeast of the project site, where six badgers were “collected” on an unknown date.

OCCURRENCE DESIGNATIONS AND STATUS CODES

Present: Species observed on the site at time of field survey or during recent past

Likely:	Species not observed on the site, but it may reasonably be expected to occur there on a regular basis
Possible:	Species not observed on the site, but it could occur there from time to time
Unlikely:	Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient
Absent:	Species not observed on the site, and precluded from occurring there due to absence of suitable habitat

STATUS CODES

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

CNPS LISTING

1A	Plants Presumed Extinct in California	2	Plants Rare, Threatened, or Endangered in
1B	Plants Rare, Threatened, or Endangered in California and elsewhere		California, but more common elsewhere

2.5 ENDANGERED, THREATENED, OR SPECIAL STATUS PLANT AND ANIMAL SPECIES MERITING FURTHER DISCUSSION

2.5.1 San Joaquin Kit Fox (*Vulpes macrotus mutica*). Federal Listing Status: Endangered; State Listing Status: Threatened

Ecology of the species. By the time the San Joaquin kit fox (SJKF) was listed as federally endangered in 1967 and California threatened in 1971, it had been extirpated from much of its historic range. The smallest North American member of the dog family (Canidae), the kit fox historically occupied the dry plains of the San Joaquin Valley, from San Joaquin County to southern Kern County (Grinnell et al. 1937). Local surveys, research projects, and incidental sightings indicate that kit fox currently occupy available habitat on the San Joaquin Valley floor and in the surrounding foothills. Core SJKF populations are located in the natural lands of western Kern County, the Carrizo Plain Natural Area in San Luis Obispo County, and the Ciervo-Panoche Natural Area in western Fresno and eastern San Benito Counties (USFWS 1998).

The SJKF prefers habitats of open or low vegetation with loose soils. In the southern and central portion of the Central Valley, kit fox are found in valley sink scrub, valley saltbrush scrub, upper Sonoran subshrub scrub, and annual grassland (USFWS 1998). Kit fox may also be found in grazed grasslands, urban settings, and in areas adjacent to tilled or fallow fields (USFWS 1998). They require underground dens to raise pups, regulate body temperature, and avoid predators and other adverse environmental conditions (Golightly and Ohmart 1984). In the central portion of

their range, they usually occupy burrows excavated by small mammals such as California ground squirrels. The SJKF is primarily carnivorous, feeding on black-tailed hares, desert cottontails, rodents, insects, reptiles, and some birds.

Potential to occur onsite. The project site is generally unsuitable for kit fox, dominated as it is by intensively maintained orchards. However, ruderal areas of the site could conceivably be used for denning. Deer Creek, which adjoins the site to the south, may represent a movement corridor for kit fox in the project vicinity. It interconnects several large blocks of natural land, including the Pixley National Wildlife Refuge's Big Deer Creek Unit and Dickey Tract. The Dickey Tract is located just 0.3 mile west of the project site.

Kit fox have historically been well-documented in the project vicinity. The CNDDDB lists 36 occurrences of the SJKF within 10 miles of the site; the closest of these is a 1975 occurrence recorded 1.5 miles to the southwest. The occurrences were primarily recorded in natural lands; however, six occurrences from the 1970s are on agricultural properties. All but seven of the occurrences are from 20 or more years ago, with the most recent recorded in 2004. Notwithstanding the lack of recent occurrences and the poor quality of most of the on-site habitats, it is possible that individuals pass through, forage within, and possibly even den on the site from time to time.

2.5.2 Bakersfield Legless Lizard (*Anniella grinnelli*). Federal Listing Status: None; State Listing Status: Species of Special Concern.

Ecology of the species. In 2013, California's sole species of legless lizard, *Anniella pulchra*, was divided into five species based on findings by Parham and Papenfuss (2008, 2013) that *A. pulchra* encompassed five separately-evolving lineages. Four new species, including the Bakersfield legless lizard (*Anniella grinnelli*), were described, and *A. pulchra* was redefined as a small regional subset of its former population.

The Bakersfield legless lizard is restricted to the southern San Joaquin Valley and the eastern Carrizo Plain, with several populations documented within Bakersfield city limits. As it is a newly-described species, little is known of its life history and behavior. At present, it is assumed to have similar habitat requirements to *A. pulchra*, occurring in warm, moist soil in a variety of

ecosystems including chaparral, desert scrub, and riparian. As with *A. pulchra*, it is thought to live primarily underground, burrowing into loose soil or leaf litter under trees and shrubs. It may also be found under surface objects such as rocks and logs. It is assumed that, like *A. pulchra*, it generally does not bask in direct sunlight.

Potential to occur onsite. The riparian corridor of Deer Creek, which lies immediately to the south of the project site, likely represents suitable habitat for this species. Should lizards occur along Deer Creek, they could conceivably bask on the access road that runs along the site's southern boundary. Several Bakersfield legless lizards were collected by T. Papenfuss approximately 2 miles west of the project site in 2016 and 2017 (CDFW 2018). The lizards were found along the dirt levee road fronting Deer Creek.

2.5.3 Burrowing Owl (*Athene cunicularia*). Federal Listing Status: None; State Listing Status: Species of Special Concern.

Ecology of the species. The burrowing owl is primarily a grassland species, but may also occur in open shrub lands, grazed pastures, and occasionally agricultural lands. The primary indicators of suitable habitat appear to be burrows for roosting and nesting and relatively short vegetation, with only sparse areas of shrubs or taller vegetation. Burrowing owls roost and nest in the burrows of California ground squirrels, and occasionally also badger, coyote, or fox. The burrowing owl diet includes a broad array of arthropods, small rodents, birds, reptiles, and amphibians. In California, burrowing owl survival and reproductive success appears linked to rodent populations, particularly California vole (*Microtus californicus*) (Gervais et al. 2006). In agricultural areas of the San Joaquin Valley, burrowing owls primarily forage within 600 meters of their nest burrows (Gervais et al. 2003). The burrowing owl was designated a California Species of Special Concern in 1978 following long-term population decline, primarily due to loss of habitat to development and agricultural practices.

Potential to occur onsite. Although the project site is largely unsuitable for the burrowing owl, consisting almost entirely of almond orchards, open areas of the site could conceivably be used for roosting and nesting by this species; in particular, the banks of the site's tailwater basin and PID irrigation canal. Burrowing owls have been documented in the near vicinity of the project

site; in 1993, active nest burrows were observed in the grassland habitat of the Dickey Tract of the Pixley National Wildlife Refuge, approximately 0.3 and 0.6 mile southwest of the site.

2.5.4 American Badger (*Taxidea taxus*). Federal Listing Status: None; State Listing Status: Species of Special Concern

Ecology of the species. The American badger is a burrowing member of the mink family that resides in grasslands, savannahs and prairies throughout much of the western United States. Badgers prey primarily on small mammals including ground squirrels, pocket gophers, and mice, which they capture by digging out the animals' burrows. Adult badgers are primarily nocturnal, foraging at night and remaining underground in sleeping dens during the day. Badgers may reuse sleeping dens, or dig a new sleeping den each day. Badgers mate in late summer to early fall, and the young are born in natal dens in March and April. Both sleeping dens and natal dens are dug in dry, friable soils with sparse overstory cover. While badgers rarely remain in a sleeping den for more than a day, natal dens may be used for a period of 4-8 weeks as the female gives birth to and raises her young.

Potential to occur onsite. The project site is generally unsuitable for badgers, dominated as it is by intensively maintained orchards. However, badgers may occasionally pass through or forage on the site, and the site's ruderal areas could conceivably be used for denning. Deer Creek, which adjoins the site to the south, may represent a movement corridor for any badgers occurring in the project vicinity. Deer Creek interconnects several large blocks of natural land, including the Pixley National Wildlife Refuge's Big Deer Creek Unit and Dickey Tract. The Dickey Tract is located just 0.3 mile west of the project site.

The CNDDDB lists two badger occurrences within a 10-mile radius of the site. The closest of these appears to be historical in nature; on an unknown date, six badgers were "collected" in the general vicinity of Earlimart, approximately 2 miles southeast of the site. More recently, in 2016, a road-killed badger was found on SR 43, approximately 6 miles southwest of the site. Lands surrounding the roadkill location were agricultural, including both dry-farmed and irrigated fields. Although badgers are fairly uncommon in the region, it is possible that individuals of this species occasionally pass through, forage, and/or den on the site.

2.6 JURISDICTIONAL WATERS

Jurisdictional waters are those rivers, creeks, drainages, lakes, ponds, reservoirs, and wetlands that are subject to the authority of the USACE, CDFW, and/or the RWQCB. In general, the USACE regulates navigable waters, tributaries to navigable waters, and wetlands adjacent to these waters, where wetlands are defined by the presence of hydric soils, hydrophytic vegetation, and wetland hydrology. The CDFW has jurisdiction over waters in California that have a defined bed and bank, and the RWQCB has jurisdiction over California surface water and groundwater. The regulation of jurisdictional waters is discussed in more detail in Section 3.2.5.

As discussed, the project site contains two short segments of an unnamed PID irrigation canal. The canal appears to be fed by Deer Creek, a known Water of the U.S. It travels generally north and west across the San Joaquin Valley, feeding a series of smaller irrigation ditches along the way. It does not appear to have downstream connectivity to Waters of the U.S. and is therefore unlikely to itself be considered a Water of the U.S.

The State Water Resources Control Board and local RWQCBs have jurisdiction over all surface and groundwater in California. Both the PID irrigation canal and the site's tailwater basin are subject to the regulatory authority of the Central Valley RWQCB.

2.7 DESIGNATED CRITICAL HABITAT

As will be discussed further in Section 3.2.3, the USFWS often designates areas of “critical habitat” when it lists species as threatened or endangered. Critical habitat is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Designated critical habitat is absent from the project site and adjacent lands. The closest unit of critical habitat is located approximately 1.5 miles southwest of the site at the Pixley National Wildlife Refuge, and is designated for the protection of the vernal pool fairy shrimp (*Branchinecta lynchi*).

2.8 NATURAL COMMUNITIES OF SPECIAL CONCERN

Natural communities of special concern are those that are of limited distribution, distinguished by significant biological diversity, home to special status species, etc. CDFW is responsible for the classification and mapping of all natural communities in California. Natural communities are assigned state and global ranks according to their degree of imperilment. Any natural community with a state rank of 3 or lower (on a 1-5 scale) is considered of special concern. Examples of natural communities of special concern in the project vicinity include vernal pools and various types of riparian forest (Sawyer, Keeler-Wolf and Evens 2012).

Natural communities of special concern are absent from the project site itself. However, the riparian zone associated with Deer Creek adjoins the site to the south, and includes several vegetation associations that have been assigned a state rank of 3 by CDFW; for example, the *Populus fremontii* – *Salix gooddingii* and *Salix gooddingii* / *Salix exigua* associations. Riparian habitats such as those found along Deer Creek were once extensive throughout the San Joaquin Valley, but have been largely converted to other uses or eliminated as a result of channel modifications and water diversions. Remaining such habitat is of critical importance to native flora and fauna.

2.9 WILDLIFE MOVEMENT CORRIDORS

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation.

The project site does not contain features likely to function as important movement corridors for wildlife. However, as discussed, Deer Creek adjoins the site to the south. Although Deer Creek in the project vicinity represents a somewhat disrupted riparian corridor, having been realigned and intermittently cleared of vegetation, it is expected to function as an important movement corridor for native wildlife. As discussed, the creek interconnects several large blocks of natural land in the project vicinity, including the Pixley National Wildlife Refuge's Big Deer Creek Unit and Dickey Tract. Animals associated with these lands would be likely to travel within or along

Deer Creek when moving between habitat patches, rather than venturing into the intensively-managed agricultural lands that surround these natural areas. A variety of birds that migrate along an elevational gradient are expected to follow Deer Creek to reach breeding habitat in the Sierra Nevada.

3.0 IMPACTS AND MITIGATIONS

3.1 SIGNIFICANCE CRITERIA

General plans, area plans, and specific projects are subject to the provisions of CEQA. The purpose of CEQA is to assess the impacts of proposed projects on the environment prior to project implementation. Impacts to biological resources are just one type of environmental impact assessed under CEQA, and vary from project to project in terms of scope and magnitude. Projects requiring removal of vegetation may result in the mortality or displacement of animals associated with this vegetation. Animals adapted to humans, roads, buildings, and pets may replace those species formerly occurring on a site. Plants and animals that are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. Such impacts may be considered either “significant” or “less than significant” under CEQA. According to *California Environmental Quality Act, Statute and Guidelines* (AEP 2012), “significant effect on the environment” means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered “significant” if they would:

- 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 CDFW or USFWS;
- 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 CDFW or USFWS;
- 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;
- 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;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065(a) states that a project may trigger the requirement to make a “mandatory finding of significance” if the project has the potential to:

“Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory.”

3.2 RELEVANT GOALS, POLICIES, AND LAWS

3.2.1 General Plan Policies of County of Tulare

In compliance with CEQA, the lead agency must consider conformance with applicable goals and policies of the General Plan of the County of Tulare. The primary biological resources goal of the Tulare County General Plan is “to preserve and protect sensitive significant habitats, enhance biodiversity, and promote healthy ecosystems throughout the County.” This goal is to be accomplished through a set of policies outlined in the General Plan (Appendix D).

Relevant biological resources policies in the Tulare County General Plan include:

- protecting rare and endangered species;
- limiting development in environmentally sensitive areas;
- requiring open space buffers between development projects and significant watercourse, riparian vegetation, wetlands, and other sensitive habitats and natural communities;
- coordinating with other government land management agencies to preserve and protect biological resources;
- implementing pesticide controls to limit effects on natural resources; and
- supporting the establishment and administration of a mitigation banking program.

3.2.2 Threatened and Endangered Species

Permits may be required from the USFWS and/or CDFW if activities associated with a proposed project have the potential to result in the “take” of a species listed as threatened or endangered under the federal and/or state Endangered Species Acts. “Take” is defined by the state of California as “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill” (California Fish and Game Code, Section 86). “Take” is more broadly defined by the federal Endangered Species Act to include “harm” (16 USC, Section 1532(19), 50 CFR, Section 17.3). The CDFW and the USFWS are responding agencies under CEQA. Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

3.2.3 Designated Critical Habitat

The USFWS often designates areas of “critical habitat” when it lists species as threatened or endangered. Critical habitat is defined by section 3(5)(A) of the federal Endangered Species Act as “(i) The specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.” The Act goes on to define “conservation” as “the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which listing under the Act is no longer necessary.”

The designation of a specific area as critical habitat does not directly affect its ownership. Federal actions that result in destruction or adverse modification of critical habitat are, however, prohibited in the absence of prior consultation with the USFWS according to provisions of the act. Furthermore, recent appellate court cases require that federal actions affecting critical habitat promote the recovery of the listed species protected by the critical habitat designation.

The USFWS designates critical habitat for a species by identifying general areas likely to contain the species’ “primary constituent elements,” or physical or biological features of the landscape

that the species needs to survive and reproduce. Although a unit of critical habitat for a particular species may be quite large, only those lands within the unit that contain the species' primary constituent elements are actually considered critical habitat by the USFWS.

3.2.4 Migratory Birds

The Federal Migratory Bird Treaty Act (FMBTA: 16 USC 703-712) prohibits killing, possessing, or trading in any bird species covered in one of four international conventions to which the United States is a party, except in accordance with regulations prescribed by the Secretary of the Interior. The name of the act is misleading, as it actually covers almost all birds native to the United States, even those that are non-migratory. The FMBTA encompasses whole birds, parts of birds, and bird nests and eggs. Additionally, California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the FMBTA (Section 3513), as well as any other native non-game bird (Section 3800).

3.2.5 Birds of Prey

Birds of prey are protected in California under provisions of the Fish and Game Code (Section 3503.5), which states that it is unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks and eagles) or Strigiformes (owls), as well as their nests and eggs. The bald eagle and golden eagle are afforded additional protection under the federal Bald and Golden Eagle Protection Act (16 USC 668), which makes it unlawful to kill birds or their eggs.

3.2.6 Nesting Birds

In California, protection is afforded to the nests and eggs of all birds. California Fish and Game Code (Section 3503) states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of "take" by the CDFW.

3.2.7 Wetlands and Other Jurisdictional Waters

Natural drainage channels and adjacent wetlands may be considered “waters of the United States” or “jurisdictional waters” subject to the jurisdiction of the USACE. The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e. the bulleted items above).

As determined by the United States Supreme Court in its 2001 *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC) decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. Similarly, in its 2006 consolidated *Carabell/Rapanos* decision, the U.S. Supreme Court ruled that a significant nexus between a wetland and other navigable waters must exist for the wetland itself to be considered a navigable and therefore jurisdictional water.

The USACE regulates the filling or grading of Waters of the U.S. under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by “ordinary high water marks” on opposing channel banks. All activities that involve the discharge of dredge or fill material into Waters of the U.S. are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be

issued until the Regional Water Quality Control Board (RWQCB) issues a Section 401 Water Quality Certification (or waiver of such certification) verifying that the proposed activity will meet state water quality standards.

3.3 POTENTIALLY SIGNIFICANT PROJECT IMPACTS/MITIGATION

As discussed in Section 1.0, the proposed project is the construction of an approximate 160-acre groundwater recharge basin, a diversion structure on an adjacent PID canal, associated piping to deliver canal water to the basin, and approximately 1,000 linear feet of new canal channel to recycle basin waters back into the existing PID canal. It is assumed that the entire 160-acre property will be permanently impacted by project activities. Potentially significant project impacts to biological resources and mitigation measures to reduce the magnitude of these impacts are discussed below.

3.3.1 Project-Related Mortality of the San Joaquin Kit Fox

Potential Impacts. As discussed in Section 2.5.1, the San Joaquin kit fox is known from the project vicinity, and individuals may occasionally pass through or forage/den within the project site. If a kit fox were present at the time of construction, then it would be at risk of project-related injury or mortality. Kit fox mortality as a result of project activities would violate the state and federal Endangered Species Acts, and is considered a potentially significant impact under CEQA.

The project will not result in significant loss of habitat for the San Joaquin kit fox because the site's habitats are marginally suitable, at best, for this species under existing conditions, and similar or higher quality habitat is regionally abundant. Moreover, the project will convert approximately 160 acres of orchard habitat generally unsuitable for the SJKF to a groundwater recharge basin of modest suitability. The basin, when dry, could be used for foraging by this species, and its banks could possibly be used for denning from time to time.

Mitigation. The following measures adapted from the U.S. Fish and Wildlife Service 2011 *Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (Appendix E) will be implemented.

Mitigation Measure 3.3.1a (Pre-construction Surveys). Preconstruction surveys for the San Joaquin kit fox shall be conducted on and within 200 feet of the project site, no less than 14 days and no more than 30 days prior to the start of ground disturbance activities on the site. The primary objective is to identify kit fox habitat features (e.g., potential dens and refugia) on and adjacent to the site and evaluate their use by kit foxes. Preconstruction surveys will be repeated following any lapses in construction of 30 days or more.

Mitigation Measure 3.3.1b (Avoidance). Should active kit fox dens be detected during preconstruction surveys, the Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified. A disturbance-free buffer will be established around the burrows in consultation with the USFWS and CDFW, to be maintained until an agency-approved biologist has determined that the burrows have been abandoned.

Mitigation Measure 3.3.1c (Minimization). Construction activities shall be carried out in a manner that minimizes disturbance to kit foxes in accordance with the USFWS *Standardized Recommendations*. The applicant shall implement all minimization measures presented in the Construction and On-going Operational Requirements section of the *Standardized Recommendations*, including, but not limited to: restriction of project-related vehicle traffic to established roads, construction areas, and other designated areas; inspection and covering of structures (e.g. pipes), as well as installation of escape structures, to prevent the inadvertent entrapment of kit foxes; restriction of rodenticide and herbicide use; and proper disposal of food items and trash. See Appendix E for more details.

Mitigation Measure 3.3.1d (Employee Education Program). Prior to the start of construction, the applicant will retain a qualified biologist to conduct a tailgate meeting to train all construction staff that will be involved with the project on the San Joaquin kit fox. This training will include a description of the kit fox and its habitat needs; a report of the occurrence of kit fox in the project vicinity; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of the measures being taken to reduce impacts to the species during project construction and implementation. The training will include a handout with all of the training information included in it. The applicant will use this handout to train any construction personnel that were not in attendance at the first meeting, prior to those personnel starting work on the site.

Mitigation Measure 3.3.1e (Mortality Reporting). The Sacramento Field Office of the USFWS and the Fresno Field Office of CDFW will be notified in writing within three working days in case of the accidental death or injury of a San Joaquin kit fox during project-related activities. Notification must include the date, time, location of the incident or of the finding of a dead or injured animal, and any other pertinent information.

Implementation of these measures will reduce potential impacts to the San Joaquin kit fox to a less than significant level under CEQA and ensure compliance with state and federal laws protecting this species.

3.3.2 Project-Related Mortality of the Bakersfield Legless Lizard

Potential Impacts. As discussed in Section 2.5.2, the Deer Creek riparian corridor immediately adjacent to the project site represents suitable habitat for the Bakersfield legless lizard. Individuals of this species occurring along Deer Creek may, from time to time, travel along or bask on the Deer Creek access roads, as has been documented in the near project vicinity (CDFW 2018). The northern such access road passes through the project site along the site's southern boundary. Should individuals of this species be basking or traveling along the road at the time of construction, they would be at risk of being struck and killed by project vehicles and equipment. Construction-related mortality of the Bakersfield legless lizard is considered a potentially significant impact under CEQA.

The project will not result in significant loss of habitat for the Bakersfield legless lizard because the site's habitats are generally unsuitable for this species under existing conditions. The only portion of the site on which the Bakersfield legless lizard could reasonably be expected to occur is the Deer Creek access road, and that road will not be permanently impacted by the project.

Mitigation. The applicant will implement the following measures for the protection of the Bakersfield legless lizard.

Mitigation Measure 3.3.2a (Minimization). Project-related vehicular and equipment travel along the Deer Creek access road shall observe a speed limit of 10 mph. During travel along this road, vehicle and equipment operators shall continually scan for lizards and snakes. If lizards or snakes are observed on the road, the operator will stop the vehicle/equipment, and wait for the animals to move off the road before resuming travel.

Mitigation Measure 3.3.2b (Employee Education Program). A description of this species and measures to avoid mortality will be included and presented in the employee education program described above in Mitigation Measure 3.3.1d.

Implementation of the above measures will reduce potential project impacts to the Bakersfield legless lizard to a less than significant level under CEQA.

3.3.3 Project-Related Mortality/Disturbance of the Burrowing Owl

Potential Impacts. As discussed in Section 2.5.3, notwithstanding the unsuitability of most of the site's habitats for the burrowing owl, individuals of this species have some potential to roost

or nest along the banks of the site's tailwater basin or PID irrigation canal, or in other open areas of the site. If individual owls occupy burrows on or immediately adjacent to the project site at the time of construction, then these owls would be at risk of construction-related injury or mortality. Construction mortality of the burrowing owl would constitute a violation of state laws (see Sections 3.2.4 to 3.2.6) and is a potentially significant impact of the project under CEQA.

The project will not result in significant loss of habitat for the burrowing owl because the site's habitats are marginally suitable, at best, for this species under existing conditions, and similar or higher quality habitat is regionally abundant. Moreover, the project will convert approximately 160 acres of orchard habitat generally unsuitable for the burrowing owl to a groundwater recharge basin of modest suitability. The basin, when dry, could be used for foraging by this species, and its banks could possibly be used for nesting or roosting.

Mitigation. The applicant will implement the following measures adapted from the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012).

Mitigation Measure 3.3.3a (Take Avoidance Survey). A take avoidance survey for burrowing owls will be conducted by a qualified biologist between 14 and 30 days prior to the start of construction. This take avoidance survey will be conducted according to methods described in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). The survey area will include all potential roosting and nesting habitat on and within 200 meters of project impact areas, where accessible.

Mitigation Measure 3.3.3b (Avoidance of Active Nests). If project activities are undertaken during the breeding season (February 1-August 31) and active nest burrows are identified within or near project impact areas, a 200-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing to prevent construction equipment and workers from entering the setback area. Buffers will remain in place for the duration of the breeding season, unless otherwise arranged with CDFW. After the breeding season (i.e. once all young have left the nest), passive relocation of any remaining owls may take place as described below.

Mitigation Measure 3.3.3c (Avoidance or Passive Relocation of Resident Owls). During the non-breeding season (September 1-January 31), resident owls occupying burrows in project impact areas may either be avoided, or passively relocated to alternative habitat. If the applicant chooses to avoid active owl burrows within the impact area during the non-breeding season, a 50-meter disturbance-free buffer will be established around these burrows, or alternate avoidance measures implemented in consultation with CDFW. The buffers will be enclosed with temporary fencing, and will

remain in place until a qualified biologist determines that the burrows are no longer active. If the applicant chooses to passively relocate owls during the non-breeding season, this activity will be conducted in accordance with a relocation plan prepared by a qualified biologist.

Implementation of the above measures will reduce potential project impacts to the burrowing owl to a less than significant level under CEQA and ensure compliance with state laws protecting this species.

3.3.4 Project-Related Mortality of American Badger

Potential Impacts. As discussed in Section 2.5.4, the American badger is relatively uncommon in the region, but individuals may occasionally pass through or forage on the project site, and badgers have some potential to den in the site's ruderal areas. If one or more badgers were denning on the site at the time of construction, then these individuals would be at risk of project-related injury or mortality. Construction mortality of American badgers is a potentially significant impact of the project under CEQA.

The project will not result in significant loss of habitat for the American badger because the site's habitats are marginally suitable, at best, for this species under existing conditions, and similar or higher quality habitat is regionally abundant. Moreover, the project will convert approximately 160 acres of orchard habitat generally unsuitable for badgers to a groundwater recharge basin of modest suitability. The basin, when dry, could be used for foraging by this species, and its banks could possibly be used for denning from time to time.

Mitigation. The following measures will be implemented to avoid and minimize the potential for project-related mortality of American badgers.

Mitigation Measure 3.3.4a: Preconstruction Surveys. A preconstruction survey for American badgers will be conducted by a qualified biologist within 30 days of the start of construction. Preconstruction surveys will be conducted in all potential denning habitat on the project site.

Mitigation Measure 3.3.4b: Avoidance. Should an active natal den be identified during the preconstruction surveys, a suitable disturbance-free buffer will be established around the den and maintained until a qualified biologist has determined that the cubs have dispersed or the den has been abandoned.

Implementation of the above measures will reduce potential project impacts to the American badger to a less than significant level under CEQA.

3.3.5 Project-Related Mortality/Disturbance of Nesting Raptors and Migratory Birds, including Swainson's Hawk, White-tailed Kite, and Loggerhead Shrike

Potential Impacts. Much of the project site consists of habitat that could be used for nesting by one or more avian species protected under the California Fish and Game Code. Orchard trees could be used for nesting by American robins or mourning doves. Residential structures could be used by house finches or black phoebes. Killdeer may nest on the ground in even the most disturbed areas of the site. The mature riparian trees along Deer Creek, which borders the project site to the south, could be used for nesting by a number of avian species, possibly including the special-status Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), and loggerhead shrike (*Lanius ludovicianus*). Raptors and migratory birds nesting within the project site at the time of construction have the potential to be injured or killed by project activities. In addition to direct "take" of nesting birds, project activities could disturb birds nesting within or adjacent to work areas such that they would abandon their nests. Project activities that adversely affect the nesting success of raptors and migratory birds or result in the mortality of individual birds constitute a violation of state laws and are considered a potentially significant impact under CEQA.

The project will not result in loss of habitat for the Swainson's hawk, white-tailed kite, or loggerhead shrike because no habitat for these species is present on the site. The riparian trees adjacent to the site within which these birds could nest will not be impacted by the project.

Mitigation. The following measures will be implemented for the protection of nesting raptors and migratory birds including the Swainson's hawk, white-tailed kite, and loggerhead shrike.

Mitigation Measure 3.3.5a (Avoidance). In order to avoid impacts to nesting raptors and migratory birds, the project will be constructed, if feasible, outside the nesting season, or between September 1st and January 31st.

Mitigation Measure 3.3.5b (Preconstruction Surveys). If project activities must occur during the nesting season (February 1-August 31), a qualified biologist will conduct preconstruction surveys for active raptor and migratory bird nests within 14 days prior to

the start of these activities. The survey will include the proposed work area(s) and surrounding lands within 500 feet, where accessible, for all nesting raptors and migratory birds save Swainson's hawk; the Swainson's hawk survey will extend to ½ mile outside of work area boundaries. If no nesting pairs are found within the survey area, no further mitigation is required.

Mitigation Measure 3.3.5c (Establish Buffers). Should any active nests be discovered near proposed work areas, the biologist will determine appropriate construction setback distances based on applicable CDFW guidelines and/or the biology of the affected species. Construction-free buffers will be identified on the ground with flagging, fencing, or by other easily visible means, and will be maintained until the biologist has determined that the young have fledged.

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

3.3.6 Project-Related Mortality of Roosting Bats, including Pallid Bat and Western Mastiff Bat

Potential Impacts. The project site's residential structures have the potential to be used for roosting by a variety of native bat species, possibly including the pallid bat (*Antrozous pallidus*) and western mastiff bat (*Eumops perotis californicus*), both California Species of Special Concern. If buildings removed by the project contain maternity colonies, many individual bats could be killed. Such a mortality event would be considered a potentially significant impact of the project under CEQA.

The project will not result in significant loss of roosting habitat for the pallid bat or western mastiff bat because similar residential structures are regionally abundant. The project will not result in loss of foraging habitat for these species because the site is expected to remain suitable for foraging following project implementation.

Mitigation. The applicant will implement the following measures to avoid and minimize the potential for project-related mortality of roosting bats, as necessary.

Mitigation Measure 3.3.6a (Temporal Avoidance). To avoid potential impacts to maternity bat roosts, building demolition should occur outside of the period between

April 1 and September 30, the time frame within which colony-nesting bats generally assemble, give birth, nurse their young, and ultimately disperse.

Mitigation Measure 3.3.6b (Preconstruction Surveys). If removal of buildings is to occur between April 1 and September 30 (general maternity bat roost season), then within 30 days prior to their removal, a qualified biologist will survey them for the presence of bats. The biologist will look for individuals, guano, and staining, and will listen for bat vocalizations. If necessary, the biologist will wait for nighttime emergence of bats from roost sites. If no bats are observed to be roosting or breeding, then no further action would be required, and construction could proceed.

Mitigation Measure 3.3.6c (Minimization). If a non-breeding bat colony is detected during preconstruction surveys, the individuals will be humanely evicted under the direction of a qualified biologist.

Mitigation Measure 3.3.6d (Avoidance of Maternity Roosts). If a maternity colony is detected during preconstruction surveys, the biologist will identify a suitable disturbance-free buffer around the colony. The buffer will remain in place until the biologist determines that the nursery is no longer active.

Implementation of the above measures will reduce impacts to roosting bats to a less than significant level under CEQA.

3.3.7 Degradation of Water Quality in Seasonal Drainages, Stock Ponds, and Downstream Waters

Potential Impacts. Extensive ground disturbance associated with construction projects often leaves the soils of construction zones barren of vegetation and, therefore, vulnerable to erosion. Eroded soil is generally carried as sediment in surface runoff to be deposited in natural creek beds, canals, and adjacent wetlands. Runoff is often polluted with grease, oil, pesticide and herbicide residues, and/or heavy metals.

The only waterway found on the project site, the unnamed PID irrigation canal, is highly maintained and appears to only discharge water to agricultural lands, such that downstream water quality would not be significantly impacted by work in or around this canal.

As discussed, Deer Creek adjoins the project site to the south. Under current project design, the southern bank of the recharge basin is less than 50 feet from the Deer Creek channel.

Construction of the basin therefore has some potential to result in sedimentation or pollution of the creek, which would be considered a significant impact of the project under CEQA.

Mitigation. The applicant will implement the following measures to prevent sedimentation and pollution of Deer Creek.

Mitigation Measure 3.3.7a (Construction Limits). Where the project site adjoins Deer Creek, the applicant will define the limits of construction with flagging, fencing, or other easily visible means. No ground-disturbing activities shall take place outside of the defined limits.

Mitigation Measure 3.3.7b (Erosion Control Measures). Straw wattles or other appropriate erosion controls will be placed between ground-disturbing activities and the Deer Creek channel.

Mitigation Measure 3.3.7c. (Storm Water Pollution Prevention Plan). The applicant will arrange for the preparation of a Storm Water Pollution Prevention Plan (SWPPP) that identifies measures to prevent erosion and sedimentation of Deer Creek and measures to prevent contaminants from entering storm water. The SWPPP will be implemented in full during project construction.

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

3.4 LESS THAN SIGNIFICANT PROJECT IMPACTS

3.4.1 Loss of Habitat for Special Status Plants

Potential Impacts. The following thirteen special status vascular plant species have been documented in the general vicinity of the project site: California jewelflower (*Caulanthus californicus*), Kern mallow (*Eremalche kernensis*), San Joaquin woollythreads (*Monolopia congdonii*), Earlimart orache (*Atriplex cordulata* var. *erecticaulis*), Lost Hills crownscale (*Atriplex coronata* var. *vallicola*), brittlescale (*Atriplex depressa*), vernal pool smallscale (*Atriplex persistens*), subtle orache (*Atriplex subtilis*), alkali mariposa-lily (*Calochortus striatus*), recurved larkspur (*Delphinium recurvatum*), spiny-sepaled button celery (*Eryngium spinosepalum*), Coulter's goldfields (*Lasthenia glabrata* spp. *coulteri*), and California alkali-grass (*Puccinellia simplex*) (see Table 1). These plant species are absent from the site due to past and ongoing disturbance of the site, the absence of suitable habitat, and/or the site's being

situated outside of the elevational range of the species. Therefore, the proposed project would have no effect on regional populations of these special status plant species.

Mitigation. Mitigation measures are not warranted.

3.4.2 Project Impacts to Special Status Animals Absent from, or Unlikely to Occur on, the Project Site

Potential Impacts. Of the 21 special status animal species potentially occurring in the region, 15 species would be absent or unlikely to occur on the site due to the absence of suitable habitat and/or the distance of the site from the known distribution of the species. These species include the vernal pool fairy shrimp (*Branchinecta lynchi*), blunt-nosed leopard lizard (*Gambelia sila*), Swainson's hawk, white-tailed kite, tricolored blackbird (*Agelaius tricolor*), western snowy plover (*Charadrius alexandrinus nivosus*), Nelson's antelope squirrel (*Ammospermophilus nelsoni*), Tipton kangaroo rat (*Dipodomys nitratoide nitratoide*), Kern brook lamprey (*Entosphenus hubbsi*), western spadefoot (*Spea hammondi*), coast horned lizard (*Phrynosoma blainvillii*), San Joaquin coachwhip (*Coluber flagellum ruddocki*), northern harrier (*Circus cyaneus*), mountain plover (*Charadrius montanus*), and loggerhead shrike (see Table 1).

Three of these species, the Swainson's hawk, white-tailed kite, and loggerhead shrike, while unlikely to occur on the site itself, have some potential to nest immediately adjacent to the project site in the Deer Creek riparian corridor. Potential project-related disturbance of nesting individuals of these species was addressed in Section 3.3.5 and fully mitigated with *Mitigation Measures 3.3.5a-c*.

The project does not have the potential to significantly impact the remaining 12 species through construction mortality or loss of habitat because there is little or no likelihood that they are present.

Mitigation. Mitigation measures are not warranted.

3.4.3 Project Impacts to Wildlife Movement Corridors

Potential Impacts. The project site does not contain any features that would function as a wildlife movement corridor. However, as discussed, Deer Creek adjoins the site to the south, and likely functions as an important travel route for native wildlife because it represents relatively undisturbed riparian habitat within a matrix of intensive agricultural uses, and because it interconnects several blocks of natural land in the project vicinity. While the project is being constructed, wildlife traveling along the Deer Creek corridor may be disturbed by the passage of vehicles and equipment along the Deer Creek access road, or by ambient construction noise, such that they may alter their movements or temporarily avoid using the corridor. It is assumed that construction will be limited to daylight hours; therefore, any wildlife using the Deer Creek corridor at night would be unaffected. The project will not physically impact Deer Creek or associated riparian habitat; therefore, following project implementation, this movement corridor will reassume its former function and value for native wildlife.

Temporary, indirect disturbance of the Deer Creek wildlife movement corridor during daylight hours only is not considered a significant impact of the project under CEQA.

Mitigation. Mitigation measures are not warranted.

3.4.4 Project Impacts to Native Wildlife Nursery Sites

Potential Impacts. The project site contains limited habitat for colonial breeders, in the form of residential structures that could be used by roosting bats. Project-related disturbance to roosting bats was addressed in Section 3.3.6 and mitigated under *Mitigation Measures 3.3.6a-c*.

Mitigation. No additional mitigation is required.

3.4.5 Project Impacts to Potential Waters of the United States

Potential Impacts. The site's unnamed PID irrigation canal and tailwater pond are both manmade features that do not replace a natural waterway. The unnamed PID canal appears to lack downstream connectivity to Waters of the U.S., and the tailwater pond has no hydrological connection to Waters of the U.S. These features are therefore unlikely to, themselves, be

considered Waters of the U.S. subject to the regulatory authority of the USACE. The project will have no impact on Waters of the U.S.

Mitigation. Mitigation measures are not warranted.

3.4.6 Project Impacts to Riparian Habitat, other Sensitive Habitats, or Designated Critical Habitat

Potential Impacts. No riparian or other sensitive habitats occur on the project site, and designated critical habitat is absent from the site and adjacent lands. Although Deer Creek and associated riparian habitat adjoin the project site to the south, the project will fully avoid these areas.

Mitigation. Mitigation measures are not warranted.

3.4.7 Local Policies or Habitat Conservation Plans

Potential Impacts. The proposed project appears to be consistent with the goals and policies of the Tulare County General Plan. No known Habitat Conservation Plans or Natural Community Conservation Plans are in effect for the area.

Mitigation. Mitigation measures are not warranted.

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APPENDIX A: VASCULAR PLANTS OF THE PROJECT SITE

APPENDIX A: VASCULAR PLANTS OF THE PROJECT SITE

The vascular plant species listed below were observed within the project site during a site survey conducted by Live Oak Associates, Inc. on April 26, 2018. The U.S. Fish and Wildlife Service wetland indicator status of each plant has been shown following its common name.

OBL - Obligate
 FACW - Facultative Wetland
 FAC - Facultative
 FACU - Facultative Upland
 UPL - Upland
 NR - No review
 NA - No agreement
 NI - No investigation

ASTERACEAE – Sunflower Family

<i>Erigeron canadensis</i>	Canada Horseweed	FACU
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BRASSICACEAE – Mustard Family

<i>Brassica nigra</i>	Black Mustard	UPL
<i>Capsella bursa-pastoris</i>	Shepherd's Purse	UPL
<i>Rorippa palustris</i>	Bog Watercress	OBL

CACTACEAE - Cactus Family

<i>Opuntia</i> sp.	Beavertail Cactus	UPL
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CARYOPHYLLACEAE – Pink Family

<i>Stellaria media</i>	Common Chickweed	FACU
<i>Chenopodium album</i>	Common Lambsquarters	FACU
<i>Salsola tragus</i>	Russian Thistle	FACU

CUCURBITACEAE – Gourd Family

<i>Curcubita foetidissima</i>	Calabazilla	UPL
<i>Melilotus officinalis</i>	Yellow Sweetclover	FACU

GERANIACEAE – Geranium Family

<i>Erodium cicutarium</i>	Redstem Filaree	UPL
<i>Erodium moschatum</i>	Whitestem Filaree	UPL

MALVACEAE – Mallow Family

<i>Malva</i> sp.	Mallow	UPL
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PALMAE – Palm Family

<i>Washingtonia filifera</i>	Washington Fan Palm	FACW
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POACEAE – Grass Family

<i>Bromus diandrus</i>	Ripgut Brome	UPL
<i>Cynodon dactylon</i>	Bermuda Grass	FAC
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Barneyard Barley	FACU
<i>Leptochloa fusca</i> ssp. <i>univerva</i>	Bearded Sprangletop	FACW
<i>Poa annua</i>	Annual Bluegrass	FACU
<i>Sorghum halepense</i>	Johnson Grass	FACU

PORTULACACEAE – Purslane Family

<i>Portulaca oleracea</i>	Common Purslane	FAC
ROSACEAE - Rose Family		
<i>Prunus dulcis</i>	Almond	UPL
SOLANACEAE - Nightshade Family		
<i>Datura stramonium</i>	Jimson Weed	UPL
ZYGOPHYLLACEAE – Puncture Vine Family		
<i>Tribulus terrestris</i>	Puncture Vine	UPL

**APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY
OCCUR ON THE PROJECT SITE**

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE PROJECT SITE

The species listed below are those that may reasonably be expected to use the habitats of the project site routinely or from time to time. The list was not intended to include birds that are vagrants or occasional transients. Terrestrial vertebrate species observed in or adjacent to the project site during the April 26, 2018 field survey have been noted with an asterisk.

CLASS: AMPHIBIA (Amphibians)

ORDER: SALIENTIA (Frogs and Toads)

FAMILY: BUFONIDAE (True Toads)

Western Toad (*Bufo boreas*)

FAMILY: HYLIDAE (Treefrogs and relatives)

Pacific Tree Frog (*Pseudacris regilla*)

FAMILY: RANIDAE (True Frogs)

Bullfrog (*Lithobates catesbeianus*)

CLASS: REPTILIA (Reptiles)

ORDER: SQUAMATA (Lizards and Snakes)

SUBORDER: SAURIA (Lizards)

FAMILY: PHRYNOSOMATIDAE

Western Fence Lizard (*Sceloporus occidentalis*)

*Side-blotched Lizard (*Uta stansburiana*)

FAMILY: TEIIDAE (Whiptails and relatives)

Western Whiptail (*Cnemidophorus tigris*)

SUBORDER: SERPENTES (Snakes)

FAMILY: COLUBRIDAE (Colubrids)

Pacific Gopher Snake (*Pituophis catenifer catenifer*)

Common Kingsnake (*Lampropeltis getulus*)

Common Garter Snake (*Thamnophis sirtalis*)

CLASS: AVES (Birds)

ORDER: ANSERIFORMES (Ducks, Geese, and Swans)

FAMILY: ANATIDAE (Ducks, Geese, and Swans)

Mallard (*Anas platyrhynchos*)

ORDER: CICONIIFORMES (Herons, Storks, Ibises and Relatives)

FAMILY: ARDEIDAE (Herons and Bitterns)

Great Blue Heron (*Ardea herodias*)

Cattle Egret (*Bubulcus ibis*)

*Great Egret (*Ardea alba*)

ORDER: FALCONIFORMES (Vultures, Hawks, and Falcons)

FAMILY: CATHARTIDAE (American Vultures)

*Turkey Vulture (*Cathartes aura*)

FAMILY: ACCIPITRIDAE (Hawks, Old World Vultures, and Harriers)

Sharp-shinned Hawk (*Accipiter striatus*)
 Cooper's Hawk (*Accipiter cooperii*)
 *Red-shouldered Hawk (*Buteo lineatus*)
 Red-tailed Hawk (*Buteo jamaicensis*)
FAMILY: FALCONIDAE (Caracaras and Falcons)
 American Kestrel (*Falco sparverius*)
ORDER: GRUIFORMES (Cranes, Rails and Relatives)
FAMILY: RALLIDAE (Rails, Gallinules, and Coots)
 *American Coot (*Fulica Americana*)
ORDER: CHARADRIIFORMES (Shorebirds, Gulls, and relatives)
FAMILY: CHARADRIIDAE (Plovers and relatives)
 *Killdeer (*Charadrius vociferus*)
FAMILY: RECURVIROSTRIDAE (Stilts and Avocets)
 *Black-necked Stilt (*Himantopus mexicanus*)
ORDER: COLUMBIFORMES (Pigeons and Doves)
FAMILY: COLUMBIDAE (Pigeons and Doves)
 *Rock Pigeon (*Columba livia*)
 *Mourning Dove (*Zenaida macroura*)
 *Eurasian Collared-Dove (*Streptopelia decaocto*)
ORDER: STRIGIFORMES (Owls)
FAMILY: TYTONIDAE (Barn Owls)
 Barn Owl (*Tyto alba*)
FAMILY: STRIGIDAE (Typical Owls)
 Great Horned Owl (*Bubo virginianus*)
ORDER: APODIFORMES (Swifts and Hummingbirds)
FAMILY: TROCHILIDAE (Hummingbirds)
 Black-chinned Hummingbird (*Archilochus alexandri*)
 Anna's Hummingbird (*Calypte anna*)
 Rufous Hummingbird (*Selasphorus rufus*)
ORDER: PICIFORMES (Woodpeckers and relatives)
FAMILY: PICIDAE (Woodpecker and Wrynecks)
 Nuttall's Woodpecker (*Picoides nuttallii*)
 Northern Flicker (*Colaptes chrysoides*)
ORDER: PASSERIFORMES (Perching Birds)
FAMILY: TYRANNIDAE (Tyrant Flycatchers)
 *Black Phoebe (*Sayornis nigricans*)
 Say's Phoebe (*Sayornis saya*)
 Western Kingbird (*Tyrannus verticalis*)
FAMILY: CORVIDAE (Jays, Magpies, and Crows)
 Western Scrub Jay (*Aphelocoma coerulescens*)
 *American Crow (*Corvus brachyrhynchos*)
 Common Raven (*Corvus corax*)
FAMILY: HIRUNDINIDAE (Swallows)
 *Cliff Swallow (*Hirundo pyrrhonota*)
 Barn Swallow (*Hirundo rustica*)
FAMILY: TURDIDAE

Western Bluebird (*Sialia mexicana*)
 American Robin (*Turdus migratorius*)
FAMILY: MIMIDAE (Mockingbirds and Thrashers)
 *Northern Mockingbird (*Mimus polyglottos*)
FAMILY: STURNIDAE (Starlings)
 European Starling (*Sturnus vulgaris*)
FAMILY: MOTACILLIDAE (Wagtails and Pipits)
 American Pipit (*Anthus rubescens*)
FAMILY: PARULIDAE (Wood Warblers and Relatives)
 Yellow-rumped Warbler (*Dendroica coronata*)
FAMILY: EMBERIZIDAE (Sparrows and Relatives)
 Savannah Sparrow (*Passerculus sandwichensis*)
 *White-crowned Sparrow (*Zonotrichia leucophrys*)
FAMILY: ICTERIDAE (Blackbirds, Orioles and Allies)
 *Brewer's Blackbird (*Euphagus cyanocephalus*)
 Brown-headed Cowbird (*Molothrus ater*)
 Bullock's Oriole (*Icterus bullockii*)
FAMILY: FRINGILLIDAE (Finches)
 *House Finch (*Carpodacus mexicanus*)
 Lesser Goldfinch (*Carduelis psaltria*)
FAMILY: PASSERIDAE (Old World Sparrows)
 *House Sparrow (*Passer domesticus*)

CLASS: MAMMALIA (Mammals)
ORDER: DIDELPHIMORPHIA (Marsupials)
FAMILY: DIDELPHIDAE (Opossums)
 Virginia Opossum (*Didelphis virginiana*)
ORDER: CHIROPTERA (Bats)
FAMILY: PHYLLOSTOMIDAE (Leaf-nosed Bats)
 Southern Long-nosed Bat (*Leptonycteris curasoae*)
FAMILY: VESPERTILIONIDAE (Evening Bats)
 Yuma Myotis (*Myotis yumanensis*)
 California Myotis (*Myotis californicus*)
 Pale Big-eared Bat (*Corynorhinus townsendii pallescens*)
 Western Pipistrelle (*Pipistrellus hesperus*)
 Big Brown Bat (*Eptesicus fuscus*)
FAMILY: MOLOSSIDAE (Free-tailed Bat)
 Brazilian Free-tailed Bat (*Tadarida brasiliensis*)
ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)
FAMILY: LEPORIDAE (Rabbits and Hares)
 Audubon's Cottontail (*Sylvilagus audubonii*)
 *Black-tailed (Hare) Jackrabbit (*Lepus californicus*)
ORDER: RODENTIA (Rodents)
FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)
 *California Ground Squirrel (*Spermophilus beecheyi*)
FAMILY: GEOMYIDAE (Pocket Gophers)

*Botta's Pocket Gopher (*Thomomys bottae*)

FAMILY: MURIDAE (Old World Rats and Mice)

Western Harvest Mouse (*Reithrodontomys megalotis*)

Deer Mouse (*Peromyscus maniculatus*)

Norway Rat (*Rattus norvegicus*)

House Mouse (*Mus musculus*)

California Vole (*Microtus californicus*)

ORDER: CARNIVORA (Carnivores)

FAMILY: CANIDAE (Foxes, Wolves, and relatives)

Coyote (*Canis latrans*)

Red Fox (*Vulpes vulpes*)

FAMILY: PROCYONIDAE (Raccoons and relatives)

Raccoon (*Procyon lotor*)

FAMILY: MEPHITIDAE (Skunks)

Striped Skunk (*Mephitis mephitis*)

FAMILY: FELIDAE (Cats)

Bobcat (*Lynx rufus*)

Feral Cat (*Felis domesticus*)

APPENDIX C: SELECTED PHOTOGRAPHS OF THE PROJECT SITE



Photo 1 (above): Mature almond orchard in the southern portion of the project site. **Photo 2 (below):** Young almond orchard in the northern portion of the project site.





Photo 3 (above): Ruderal strip of land along the northern boundary of the project site, fronting Avenue 72. **Photo 4 (below):** Ruderal area to the north of the on-site residence.





Photo 5 (above): Residential area consisting of a home, an outbuilding, animal enclosures, and several ornamental trees and shrubs. **Photo 6 (below):** The project site's tailwater basin.





Photo 7 (above): Unnamed PID irrigation canal, two small segments of which pass through the project site along its eastern boundary.

APPENDIX D: TULARE COUNTY GENERAL PLAN POLICIES

8. Environmental Resources Management

Conservation of species is provided for in the many recommendations for preservation of wildlife habitat, as well as provision for new areas for this use; the identification of endangered species and their special habitat areas, wildlife preserves, recommendations for controlled use of wildlands and other open space areas; and recommendations for conservation of the diversified life style environments and economic aspects of Tulare County.

Recreation. Another part of this General Plan addresses the recreational needs of the residents of Tulare County. This plan is provided for all socio-economic levels and in diverse locations so that everyone may have accessibility. Recreation and park sites are also open space so that they can be considered as implementation devices for a part of the Plan for Open Space. This reinforces the concept that the more related uses that can be found for a land parcel, the easier its preservation and conservation can be justified. Further, open land use for economically sound purposes has a higher probability of remaining in open space use. Recreational sites often provide wildlife habitat, vegetation to mitigate air pollution, and in some cases aquifer recharge areas or watershed protection, sometimes in addition to agricultural or forestry based economic returns.

Through designation of significant open space areas, which can be utilized for recreational purposes, and with the establishment of protective zoning, the recreational needs of the citizens of the County will be met.

8.1 Biological Resources

ERM-1	To preserve and protect sensitive significant habitats, enhance biodiversity, and promote healthy ecosystems throughout the County.
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ERM-1.1 Protection of Rare and Endangered Species

The County shall ensure the protection of environmentally sensitive wildlife and plant life, including those species designated as rare, threatened, and/or endangered by State and/or Federal government, through compatible land use development.

ERM-1.2 Development in Environmentally Sensitive Areas

The County shall limit or modify proposed development within areas that contain sensitive habitat for special status species and direct development into less significant habitat areas. Development in natural habitats shall be controlled so as to minimize erosion and maximize beneficial vegetative growth.

ERM-1.3 Encourage Cluster Development

When reviewing development proposals, the County shall encourage cluster development in areas with moderate to high potential for sensitive habitat.

ERM-1.4 Protect Riparian Areas

The County shall protect riparian areas through habitat preservation, designation as open space or recreational land uses, bank stabilization, and development controls.

ERM-1.5 Riparian Management Plans and Mining Reclamation Plans

The County shall require mining reclamation plans and other management plans to include measures that protect, maintain, and restore riparian resources and habitats.

ERM-1.6 Management of Wetlands

The County shall support the preservation and management of wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats.

ERM-1.7 Planting of Native Vegetation

The County shall encourage the planting of native trees, shrubs, and grasslands in order to preserve the visual integrity of the landscape, provide habitat conditions suitable for native vegetation and wildlife, and ensure that a maximum number and variety of well-adapted plants are maintained.

ERM-1.8 Open Space Buffers

The County shall require buffer areas between development projects and significant watercourses, riparian vegetation, wetlands, and other sensitive habitats and natural communities. These buffers should be sufficient to assure the continued existence of the waterways and riparian habitat in their natural state.

ERM-1.9 Coordination of Management on Adjacent Lands

The County shall work with other government land management agencies (such as the Bureau of Land Management, US Forest Service, National Park Service) to preserve and protect biological resources, including those within and adjacent to designated critical habitat, reserves, preserves, and other protected lands, while maintaining the ability to utilize and enjoy the natural resources in the County.

ERM-1.10 Appropriate Access for Recreation

The County shall encourage appropriate access to resource-managed lands.

ERM-1.11 Hunting and Fishing

The County shall provide opportunities for hunting and fishing activities within the County pursuant to appropriate regulations of the California Fish & Game Code.

ERM-1.12 Management of Oak Woodland Communities

The County shall support the conservation and management of oak woodland communities and their habitats.

ERM-1.13 Pesticides

The Tulare County Agricultural Commissioner/Sealer will cooperate with State and Federal agencies in evaluating the side effects of new materials and techniques in pesticide controls to limit effects on natural resources.

ERM-1.14 Mitigation and Conservation Banking Program

The County shall support the establishment and administration of a mitigation banking program, including working cooperatively with TCAG, Federal, State, not-for-profit and other agencies and groups to evaluate and identify appropriate lands for protection and recovery of threatened and endangered species impacted during the land development process.

ERM-1.15 Minimize Lighting Impacts

The County shall ensure that lighting associated with new development or facilities (including street lighting, recreational facilities, and parking) shall be designed to prevent artificial lighting from illuminating adjacent natural areas at a level greater than one foot candle above ambient conditions.

ERM-1.16 Cooperate with Wildlife Agencies

The County shall cooperate with State and federal wildlife agencies to address linkages between habitat areas.

ERM-1.17 Conservation Plan Coordination

The County shall coordinate with local, State, and federal habitat conservation planning efforts (including Section 10 Habitat Conservation Plan) to protect critical habitat areas that support endangered species and other special-status species.

8.2 Mineral Resources – Surface Mining

ERM-2

To conserve protect and encourage the development of areas containing mineral deposits while considering values relating to water resources, air quality, agriculture, traffic, biotic, recreation, aesthetic enjoyment, and other public interest values.

ERM-2.1 Conserve Mineral Deposits

The County will encourage the conservation of identified and/or potential mineral deposits, recognizing the need for identifying, permitting, and maintaining a 50 year supply of locally available PCC grade aggregate.

ERM-2.2 Recognize Mineral Deposits

The County will recognize as a part of the General Plan those areas of identified and/or potential mineral deposits.



See Figure 8-2: Tulare County Mineral Resource Zones on the next page.

ERM-2.3 Future Resource Development

The County will provide for the conservation of identified and/or potential mineral deposits within Tulare County as areas for future resource development. Recognize that mineral deposits are significantly limited within Tulare County and that they play an important role in support of the economy of the County.

ERM-2.4 Identify New Resources

The County will encourage exploration, evaluation, identification, and development of previously unrecognized but potentially significant hard rock resources for production of crushed stone aggregate.

ERM-2.5 Resources Development

The County will promote the responsible development of identified and/or potential mineral deposits.

ERM-2.6 Streamline Process

The County will create a streamlined and timely permitting process for the mining industry, which will help encourage long-range planning and the reasonable amortization of investments.

ERM-2.7 Minimize Adverse Impacts

The County will minimize the adverse effects on environmental features such as water quality and quantity, air quality, flood plains, geophysical characteristics, biotic, archaeological, and aesthetic factors.

ERM-2.8 Minimize Hazards and Nuisances

The County will minimize the hazards and nuisances to persons and properties in the area during extraction, processing, and reclamation operations.

**APPENDIX E: U.S. FISH AND WILDLIFE SERVICE STANDARDIZED
RECOMMENDATIONS FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN
KIT FOX PRIOR TO OR DURING GROUND DISTURBANCE**

**U.S. FISH AND WILDLIFE SERVICE
STANDARDIZED RECOMMENDATIONS
FOR PROTECTION OF THE ENDANGERED SAN JOAQUIN KIT FOX
PRIOR TO OR DURING GROUND DISTURBANCE**

Prepared by the Sacramento Fish and Wildlife Office
January 2011

INTRODUCTION

The following document includes many of the San Joaquin kit fox (*Vulpes macrotis mutica*) protection measures typically recommended by the U. S. Fish and Wildlife Service (Service), prior to and during ground disturbance activities. **However, incorporating relevant sections of these guidelines into the proposed project is not the only action required under the Endangered Species Act of 1973, as amended (Act) and does not preclude the need for section 7 consultation or a section 10 incidental take permit for the proposed project.** Project applicants should contact the Service in Sacramento to determine the full range of requirements that apply to your project; the address and telephone number are given at the end of this document. Implementation of the measures presented in this document may be necessary to avoid violating the provisions of the Act, including the prohibition against "take" (defined as killing, harming, or harassing a listed species, including actions that damage or destroy its habitat). These protection measures may also be required under the terms of a biological opinion pursuant to section 7 of the Act resulting in incidental take authorization (authorization), or an incidental take permit (permit) pursuant to section 10 of the Act. The specific measures implemented to protect kit fox for any given project shall be determined by the Service based upon the applicant's consultation with the Service.

The purpose of this document is to make information on kit fox protection strategies readily available and to help standardize the methods and definitions currently employed to achieve kit fox protection. The measures outlined in this document are subject to modification or revision at the discretion of the Service.

IS A PERMIT NECESSARY?

Certain acts need a permit from the Service which includes destruction of any known (occupied or unoccupied) or natal/pupping kit fox dens. Determination of the presence or absence of kit foxes and /or their dens should be made during the environmental review process.

All surveys and monitoring described in this document must be conducted by a qualified biologist and these activities do not require a permit. A qualified biologist (biologist) means any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience in the identification and life history of the San Joaquin kit fox. In addition, the biologist(s) must be able to identify coyote, red fox,

gray fox, and kit fox tracks, and to have seen a kit fox in the wild, at a zoo, or as a museum mount. Resumes of biologists should be submitted to the Service for review and approval prior to any survey or monitoring work occurring.

SMALL PROJECTS

Small projects are considered to be those projects with small foot prints, of approximately one acre or less, such as an individual in-fill oil well, communication tower, or bridge repairs. These projects must stand alone and not be part of, or in any way connected to larger projects (i.e., bridge repair or improvement to serve a future urban development). The Service recommends that on these small projects, the biologist survey the proposed project boundary and a 200-foot area outside of the project footprint to identify habitat features and utilize this information as guidance to situate the project to minimize or avoid impacts. If habitat features cannot be completely avoided, then surveys should be conducted and the Service should be contacted for technical assistance to determine the extent of possible take.

Preconstruction/preactivity surveys shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to impact the San Joaquin kit fox. Kit foxes change dens four or five times during the summer months, and change natal dens one or two times per month (Morrell 1972). Surveys should identify kit fox habitat features on the project site and evaluate use by kit fox and, if possible, assess the potential impacts to the kit fox by the proposed activity. The status of all dens should be determined and mapped (see Survey Protocol). Written results of preconstruction/preactivity surveys must be received by the Service within five days after survey completion and prior to the start of ground disturbance and/or construction activities.

If a natal/pupping den is discovered within the project area or within 200-feet of the project boundary, the Service shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping or new information, the project applicant should contact the Service immediately to obtain the necessary take authorization/permit.

If the take authorization/permit has already been issued, then the biologist may proceed with den destruction within the project boundary, except natal/pupping den which may not be destroyed while occupied. A take authorization/permit is required to destroy these dens even after they are vacated. Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated, see den destruction section).

OTHER PROJECTS

It is likely that all other projects occurring within kit fox habitat will require a take authorization/permit from the Service. This determination would be made by the Service during the early evaluation process (see Survey Protocol). These other projects would include, but are not limited to: Linear projects; projects with large footprints such as urban development; and projects which in themselves may be small but have far reaching impacts (i.e., water storage or conveyance facilities that promote urban growth or agriculture, etc.).

The take authorization/permit issued by the Service may incorporate some or all of the protection measures presented in this document. The take authorization/permit may include measures specific to the needs of the project and those requirements supersede any requirements found in this document.

EXCLUSION ZONES

In order to avoid impacts, construction activities must avoid their dens. The configuration of exclusion zones around the kit fox dens should have a radius measured outward from the entrance or cluster of entrances due to the length of dens underground. The following distances are **minimums**, and if they cannot be followed the Service must be contacted. Adult and pup kit foxes are known to sometimes rest and play near the den entrance in the afternoon, but most above-ground activities begin near sunset and continue sporadically throughout the night. Den definitions are attached as Exhibit A.

Potential den**	50 feet
Atypical den**	50 feet
Known den*	100 feet
Natal/pupping den (occupied <u>and</u> unoccupied)	Service must be contacted

***Known den:** To ensure protection, the exclusion zone should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, orange construction fencing or other fencing as approved by the Service as long as it has openings for kit fox ingress/egress and keeps humans and equipment out. Exclusion zone fencing should be maintained until all construction related or operational disturbances have been terminated. At that time, all fencing shall be removed to avoid attracting subsequent attention to the dens.

****Potential and Atypical dens:** Placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.

Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any other type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.

DESTRUCTION OF DENS

Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed. The value to kit foxes of potential, known, and natal/pupping dens differ and therefore, each den type needs a different level of protection.

Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the Service.

Destruction of the den should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den as described above should be resumed. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.

Natal/pupping dens: Natal or pupping dens which are occupied will not be destroyed until the pups and adults have vacated and then only after consultation with the Service. Therefore, project activities at some den sites may have to be postponed.

Known Dens: Known dens occurring within the footprint of the activity must be monitored for three days with tracking medium or an infra-red beam camera to determine the current use. If no kit fox activity is observed during this period, the den should be destroyed immediately to preclude subsequent use.

If kit fox activity is observed at the den during this period, the den should be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Use of the den can be discouraged during this period by partially plugging its entrances(s) with soil in such a manner that any resident animal can escape easily. Only when the den is determined to be unoccupied may the den be excavated under the direction of the biologist. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may have to be excavated when, in the judgment of a biologist, it is temporarily vacant, for example during the animal's normal foraging activities.

The Service encourages hand excavation, but realizes that soil conditions may necessitate the use of excavating equipment. However, extreme caution must be exercised.

Potential Dens: If a take authorization/permit has been obtained from the Service, den destruction may proceed without monitoring, unless other restrictions were issued with the take authorization/permit. If no take authorization/permit has been issued, then potential dens should be monitored as if they were known dens. If any den was considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the Service shall be notified immediately.

CONSTRUCTION AND ON-GOING OPERATIONAL REQUIREMENTS

Habitat subject to permanent and temporary construction disturbances and other types of ongoing project-related disturbance activities should be minimized by adhering to the following activities. Project designs should limit or cluster permanent project features to the smallest area possible while still permitting achievement of project goals. To minimize temporary disturbances, all project-related vehicle traffic should be restricted to established roads, construction areas, and other designated areas. These areas should also be included in preconstruction surveys and, to the extent possible, should be established in locations disturbed by previous activities to prevent further impacts.

1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and State and Federal highways; this is particularly important at night when kit foxes are most active. Night-time construction should be minimized to the extent possible. However if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.
2. To prevent inadvertent entrapment of kit foxes or other animals during the construction phase of a project, all excavated, steep-walled holes or trenches more than 2-feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured kit fox is discovered, the Service and the California Department of Fish and Game (CDFG) shall be contacted as noted under measure 13 referenced below.
3. Kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at a construction site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a kit fox is

discovered inside a pipe, that section of pipe should not be moved until the Service has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.

4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from a construction or project site.
5. No firearms shall be allowed on the project site.
6. No pets, such as dogs or cats, should be permitted on the project site to prevent harassment, mortality of kit foxes, or destruction of dens.
7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other State and Federal legislation, as well as additional project-related restrictions deemed necessary by the Service. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.
8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a kit fox or who finds a dead, injured or entrapped kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.
9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.
10. Upon completion of the project, all areas subject to temporary ground disturbances, including storage and staging areas, temporary roads, pipeline corridors, etc. should be

re-contoured if necessary, and revegetated to promote restoration of the area to pre-project conditions. An area subject to "temporary" disturbance means any area that is disturbed during the project, but after project completion will not be subject to further disturbance and has the potential to be revegetated. Appropriate methods and plant species used to revegetate such areas should be determined on a site-specific basis in consultation with the Service, California Department of Fish and Game (CDFG), and revegetation experts.

11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the Service should be contacted for guidance.
12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFG immediately in the case of a dead, injured or entrapped kit fox. The CDFG contact for immediate assistance is State Dispatch at (916)445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist, at (530)934-9309. The Service should be contacted at the numbers below.
13. The Sacramento Fish and Wildlife Office and CDFG shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The Service contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFG contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.
14. New sightings of kit fox shall be reported to the California Natural Diversity Database (CNDDDB). A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below.

Any project-related information required by the Service or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at:

Endangered Species Division
2800 Cottage Way, Suite W2605
Sacramento, California 95825-1846
(916) 414-6620 or (916) 414-6600

EXHIBIT “A” - DEFINITIONS

"Take" - Section 9 of the Endangered Species Act of 1973, as amended (Act) prohibits the "take" of any federally listed endangered species by any person (an individual, corporation, partnership, trust, association, etc.) subject to the jurisdiction of the United States. As defined in the Act, take means " . . . to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct". Thus, not only is a listed animal protected from activities such as hunting, but also from actions that damage or destroy its habitat.

"Dens" - San Joaquin kit fox dens may be located in areas of low, moderate, or steep topography. Den characteristics are listed below, however, the specific characteristics of individual dens may vary and occupied dens may lack some or all of these features. Therefore, caution must be exercised in determining the status of any den. Typical dens may include the following: (1) one or more entrances that are approximately 5 to 8 inches in diameter; (2) dirt berms adjacent to the entrances; (3) kit fox tracks, scat, or prey remains in the vicinity of the den; (4) matted vegetation adjacent to the den entrances; and (5) manmade features such as culverts, pipes, and canal banks.

"Known den" - Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms "active" and "inactive" when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens often, with the result that the status of a given den may change frequently and abruptly.

"Potential Den" - Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

"Natal or Pupping Den" - Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposes of this definition either term applies.

"Atypical Den" - Any manmade structure which has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Appendix C

Cultural Records Search Results



To: Molly McDonnell
4 Creeks, Inc.
324 S. Santa Fe, Suite A
Visalia, CA 93292

Record Search 18-223

Date: May 14, 2018

Re: Pixley Groundwater Recharge Basin

County: Tulare

Map(s): Pixley 7.5'

CULTURAL RESOURCES RECORDS SEARCH

The California Office of Historic Preservation (OHP) contracts with the California Historical Resources Information System's (CHRIS) regional Information Centers (ICs) to maintain information in the CHRIS inventory and make it available to local, state, and federal agencies, cultural resource professionals, Native American tribes, researchers, and the public. Recommendations made by IC coordinators or their staff regarding the interpretation and application of this information are advisory only. Such recommendations do not necessarily represent the evaluation or opinion of the State Historic Preservation Officer in carrying out the OHP's regulatory authority under federal and state law.

The following are the results of a search of the cultural resource files at the Southern San Joaquin Valley Information Center. These files include known and recorded cultural resources sites, inventory and excavation reports filed with this office, and resources listed on the National Register of Historic Places, Historic Property Directory, California State Historical Landmarks, California Register of Historical Resources, California Inventory of Historic Resources, and California Points of Historical Interest. Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area.

PRIOR CULTURAL RESOURCE STUDIES CONDUCTED WITHIN THE PROJECT AREA AND WITHIN THE ONE-HALF MILE RADIUS

According to the information in our files, there have been no previous cultural resource studies conducted within the project area. There have seven studies conducted within the one-half mile radius, TU-00102, 00521, 00551, 00753, 00754, 01324, and 01594.

KNOWN/RECORDED CULTURAL RESOURCES WITHIN THE PROJECT AREA AND WITHIN THE ONE-HALF MILE RADIUS

There are no recorded cultural resources within project area. There are three recorded resources within the one-half mile radius, P-54-002191, 002192, and 004626. These resources consist of two historic era earthen canals and one historic era railroad. Additionally, there is also an historic era bridge in the one-half mile radius that is known but unrecorded.

There are no recorded cultural resources within the project area or radius that are listed in the National Register of Historic Places, the California Register of Historical Resources, the California Points of Historical Interest, California Inventory of Historic Resources, or the California State Historic Landmarks.

COMMENTS AND RECOMMENDATIONS

We understand this project consists of construction of a groundwater recharge basin on land currently used for agricultural purposes. Please note that agriculture does not constitute previous development, as it does not destroy cultural resources but merely moves them around within the plow zone. Because this project area has not been previously surveyed for cultural resources, it is unknown if any exist there. Therefore, prior to any ground disturbance activities, we recommend a qualified, professional archaeologist conduct a field survey to determine if cultural resources are present. A list of qualified consultants can be found at www.chrisinfo.org.

We also recommend that you contact the Native American Heritage Commission in Sacramento. They will provide you with a current list of Native American individuals/organizations that can assist you with information regarding cultural resources that may not be included in the CHRIS Inventory and that may be of concern to the Native groups in the area. The Commission can consult their "Sacred Lands Inventory" file in order to determine what sacred resources, if any, exist within this project area and the way in which these resources might be managed. Finally, please consult with the lead agency on this project to determine if any other cultural resource investigation is required. If you need any additional information or have any questions or concerns, please contact our office at (661) 654-2289.

By:



Celeste M. Thomson, Coordinator

Date: May 14, 2018

Please note that invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.