INITIAL STUDY CHECKLIST

1. Project title:	Well No. 5A Auxiliary Power and Pumps Project
2. Lead agency:	Orosi Public Utility District 12488 Avenue 416 Orosi, CA 93247
3. Contact person:	Dennis R. Keller Dennis R. Keller Consulting Civil Engineer, Inc. (559) 732-7938
4. Project location:	Section 18, Township 16 South, Range 25 East, MDB&M. Tulare County Assessor Parcel Number 023-160-040
5. Latitude, Longitude:	36°32'18" N, 119°17'28" W
6. General plan designation:	Public/School
7. Zoning:	Single Family Residential – low density (R-1), Single Family Residential – high density (R-3)
8. Description of project:	The Proposed Project addresses the water supply delivery capability of Well No. 5A. The Proposed Project consists of installing a new 500 kW standby diesel generator and three (3) booster pumps at the District's Well No. 5A site to improve domestic water supply delivery. Proposed Project features (generator, automatic transfer switch, building, pumps and electrical connections) will be constructed above ground at the well site. Construction activities include earthwork, site grading, concrete work and electrical work. The Project consists of the completion of the bidding, award, construction and start-up of the emergency stand-by generator and new booster pumps.
9. Surrounding land uses and setting:	Surrounding land uses include residential, agricultural and roads including a state highway
10. Other public agencies whose approval is required	County of Tulare and State Water Resources Control Board – Division of Drinking Water

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

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

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

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

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

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

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

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

Dennis R Keller — 10 March 2026

Signature — Date

Dennis R. Keller, Consulting Civil Engineer — Orosi Public Utility District

Printed name — For

Issues:

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 a state scenic highway?	☐	☐	☐	☒
c) In nonurbanized 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?	☐	☐	☒	☐

Discussion

a. **No Impact.** The Proposed Project does not result in a change in the scenic characteristics of the site and surrounding areas. The Proposed Project would occur on District owned land which is used for a domestic water well, hydropneumatic tank and above-ground water storage tank. The Proposed Project site is bounded on two (2) sides by residential land uses that includes mature trees and chain link fencing. The well site has been in use since 1979.

b. **No Impact.** There are no scenic resources on or near the Proposed Project site. The Project is not located adjacent to or near a state scenic highway.

c. **No Impact.** The Proposed Project would occur on District owned land which is utilized for domestic water supply purposes, including a water well, discharge piping, hydropneumatic tank, above-ground water storage and electrical control panels. The Proposed Project site is surrounded by chain link fencing.

d. **Less than Significant Impact.** The Proposed Project would not create a new source of substantial light or glare. New facilities will require some additional lighting for security purposes. The new lighting will be minimized to take advantage of existing lighting and will not significantly change lighting at the site of the Proposed Project. The Proposed Project site is large with the facilities located in the middle of the west side where existing facilities are located.

II. AGRICULTURE & FORESTRY RESOURCES	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. **Would the 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?	☐	☐	☐	☒
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 in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Discussion

a. **No Impact.** The Proposed Project will be constructed on land used for existing facilities and will not remove any land from agricultural production.

b. **No Impact.** The Proposed Project area is currently zoned Single Family Residential, both low density (R-1) and high density (R-3).

c. **No Impact.** There are no forest lands or timberland within the limits of the Proposed Project.

d. **No Impact.** There are no forest lands within the limits of the Proposed Project.

e. **No Impact.** See previous responses to Items (a) through (d).

III. AIR QUALITY

	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. **Would the project:**				
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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
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.	☐	☐	☐	☒

Discussion

The air quality impacts from construction activities and the annual operation and maintenance activities from the operation of the Proposed Project have been evaluated using the California Emissions Estimator Model (CalEEMod). The results have been compared against thresholds established by the San Joaquin Valley Air Pollution Control District (Air District) and are estimated to be below any threshold. A summary of the emissions estimates is attached for reference (Appendix B). The operation of the standby diesel generator will be subject to operating permit condition established by the Air District.

a. **No Impact.** The Proposed Project will not conflict with any applicable air quality plan. During construction, however, the District and the selected contractor would be required to comply with the San Joaquin Valley Air Pollution Control District's Regulation VIII.

b. **No Impact.** Air emissions estimates for construction and operations do not indicate a significant increase for any non-attainment pollutant.

c. **No Impact.** See response to Items (a) and (b).

d. **No Impact.** The Proposed Project consists of the installation of a standby generator and electronically operated booster pumps. The Proposed Project will not result in continuous emissions including objectionable odors. See responses to Items (a) and (b).

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 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 (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?	☐	☐	☐	☒

IV. BIOLOGICAL RESOURCES (continued)

Discussion

A Biological Evaluation Letter was completed in November, 2025, that included a field survey completed in October, 2025. Identification of special status species included a search of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Vascular Plants of California. The Letter has been attached for reference.

a. **Less Than Significant with Mitigation Incorporation.** The Report established that the potential exists for construction-related mortality and/or disturbances of nesting raptors and birds. The Report determined that the magnitude of the potential impacts could be reduced to a less than significant level through the incorporation of the following mitigation practices: scheduling of construction during low risk times of year (i.e., construction timing), preconstruction surveys and avoidance of active nests (buffer zones). Preventive measures will be incorporated into construction documents to avoid potential impacts.

b. **No Impact.** The biological field survey did not establish the presence of sensitive natural communities, or designated critical habitat.

c. **No Impact.** The biological field survey conducted in October, 2025, did not identify any wetlands on the Proposed Project site.

d. **No Impact.** The biological field survey established that area does not have wildlife movement corridors. The Proposed Project does not result in features that impede the movement of common wildlife found at the site and its surroundings.

e. **No Impact.** The Proposed Project does not conflict with the General Plan Policies of Tulare County (2023). See response to Item (b).

f. **No Impact.** No Habitat Conservation Plan has been identified for, or that includes, the Proposed Project area. Since the Proposed Project does not result in any change to existing land use and associated conditions, it not expected to conflict with any local, regional or state conservation plans.

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 §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Discussion

A Class III Inventory/Phase I Survey was completed for the Proposed Project site in December, 2025, that included field surveys, record surveys and tribal contacts. A field survey was conducted on December 3, 2025. No cultural resources were identified within the surveyed area that warranted consideration under the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR). The Report is attached for reference.

a. **No Impact.** The Proposed Project area consists of an actively maintained well site. The Survey report did not identify the presence of a historical resource within the Proposed Project area.

b. **No Impact.** The Proposed Project area consists of an actively maintained well site. The Survey report did not identify presence of any archaeological resources within or adjacent to the Proposed Project site.

c. **No Impact.** The Proposed Project area consists of an active well site. No formal cemetery is located within the Proposed Project area. Measures shall be implemented during construction to address discovery of human remains or other archaeological resources.

VI. ENERGY

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Discussion

a. **Less Than Significant Impact.** The Proposed Project consists of installing a standby generator and booster pumps to provide water for domestic purposes. New pumping equipment will be designed to current energy efficiency standards.

b. **No Impact.** The Proposed Project does not include elements that would be associated with state or local energy efficiency plans.

VII. 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 most recently adopted Uniform Building Code creating substantial risks to life or property?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

VII. GEOLOGY AND SOILS (continued)

Discussion

a. **No Impact.** The Proposed Project location is not shown in an area designated to be affected by active earthquake fault zones or landslide and liquefaction zones as reviewed through the California Geological Survey Information Warehouse web-based regulatory mapping tool.

b. **No Impact.** Proposed Project locations include graded areas and concrete surfacing for equipment. Construction specifications for the Proposed Project will require compaction of all disturbed areas which will minimize the potential for erosion.

c. **No Impact.** According to the National Resource Conservation Service (Soil Conservation Service), the Proposed Project area includes consists entirely of Exeter Loam. The soil summary does not list any geologic hazards such as soil instability or subsidence. See response to Item (a).

d. **No Impact.** Soils identified at the Proposed Project location do not indicate expansive characteristics. See response to Item (c).

e. **No Impact.** Criteria does not apply. The Proposed Project does not include installation of septic tanks or alternative wastewater disposal systems.

VIII. 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?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

Discussion

a. **Less than Significant Impact.** Estimates of greenhouse gases resulting from the construction activities and the annual operation and maintenance activities from the operation of the Proposed Project have been determined using the California Emissions Estimator Model (CalEEMod). The San Joaquin Valley Air Pollution Control District does not have an annual greenhouse emissions standard. The results are estimated to be below the interim threshold of 10,000 metric tons (MT) established by the California Air Resources Board. A summary of the emissions estimates is attached for reference (Appendix B).

b. **No Impact.** The Proposed Project would not conflict with any applicable plan, policy or regulation adopted for reducing the emissions of greenhouse gases.

IX. 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) 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.	☐	☐	☐	☒

IX. HAZARDS AND HAZARDOUS MATERIALS (continued)

Discussion

a. **Less Than Significant Impact.** The operation of the standby power generator element of the Proposed Project will require periodic transport of fuel used for equipment operation. The quantity of fuel and infrequent refueling will not represent a significant hazard. The transport, use and storage of fuel will be in accordance with regulatory requirements. The operation of the well requires periodic transport of chemicals used for water disinfection (liquid sodium hypochlorite) equipment maintenance (lubricants), and grounds maintenance (herbicides, etc.). The quantities of such chemicals will not represent a significant hazard. The transport, use and storage of chemicals has been and will be in accordance with regulatory requirements. Construction of the Proposed Project will require the use of fuel and associated materials equipment operation (lubricants). The quantities do not represent a significant hazard. The transport, use and disposal of such materials will be in accordance with regulatory requirements.

b. **Less Than Significant Impact.** The operation of the Proposed Project will not require the regular use of significant quantities of chemicals. The operation of the Proposed Project will require fuel used for equipment operation. The quantity of fuel will not represent a significant hazard. The site for the proposed standby generator lies behind security fencing and locked gates. Equipment operation associated with construction will require lubricants. The quantities of such chemicals will not represent a significant hazard.

c. **No Impact.** The playing fields associated with Golden Valley Elementary and Middle School lie approximately 320 feet north of the Proposed Project location. School buildings lie approximately 940 feet north of the Project site. Residential homes sit between the school and the Proposed Project location. See responses to Items (a) and (b).

d. **No Impact.** The Proposed Project will not be constructed on a hazardous materials site. The Proposed Project site is not on the Cortese List.

e. **No Impact.** The Proposed Project site is not located near a private airstrip. No private airstrips were identified within five (5) miles of the Proposed Project site.

f. **No Impact.** There are no emergency response plans which involve the Proposed Project site.

g. **No Impact.** Wildlands are not considered present within the Project Area. The Proposed Project site consists of leveled agricultural land and roadways. No changes in adjacent land uses are proposed.

X. 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 or otherwise substantially degrade surface or groundwater quality?	☐	☐	☐	☒
b) Substantially deplete 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, 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?	☐	☐	☐	☒

IX. HYDROLOGY AND WATER QUALITY (continued)

Discussion

a. **No Impact.** The Proposed Project consists of the installation of a new standby diesel generator and three (3) booster pumps. The Proposed Project, whether during construction, or following completion, will not degrade water quality. Construction requirements, such as a Storm Water Pollution Prevention Plan (SWPPP), will be utilized to prevent water quality impacts during construction of the improvements.

b. **No Impact.** The Proposed Project consists of improvements to existing groundwater extraction facilities. The Proposed Project addresses water delivery reliability and will not result in community growth that would increase groundwater use.

c(i). **No Impact.** The Proposed Project area consists of leveled land. Elements of the Proposed Project will be constructed at existing grades. No changes to existing grades on or adjacent to the Project site are proposed. The Proposed Project would not substantially alter the existing drainage pattern of the area.

c(ii). **No Impact.** The Proposed Project area consists of undeveloped and graded land areas. The Proposed Project includes surface restoration requirements. The amount of impervious area will not increase to the degree that it will alter the existing drainage quantity from the area.

c(iii). **No Impact.** The Proposed Project area is not served by a stormwater drainage system. The amount of impervious surface resulting from the Proposed Project reflects existing conditions. See response to Item c(ii).

c(iv). **No Impact.** The Proposed Project is located in Zone X – 0.2 Percent chance Annual Flood Hazard. Above-ground features will be constructed above recorded flood elevations. National Flood Hazard Layer Flood Insurance Rate Maps (FIRM) Firmette maps are attached in Appendix E for reference.

d. **Less than Significant Impact.** The Proposed Project includes fuel storage for the standby diesel generator. Equipment features and construction above recorded flood elevations will minimize the risk of the release of pollutants. The Proposed Project is not located in areas subject to flooding. The Proposed Project is located in Zone X – 0.2 Percent chance Annual Flood Hazard.

The Proposed Project site is located approximately 118 miles from the Pacific Ocean and separated by the coastal mountain ranges (elevation of approximately 3,000 ft). Consequently, the Proposed Project site is not subject to inundation by tsunami. The Proposed Project site is not located adjacent to an enclosed body of water that could be subject to a seiche. The Proposed Project site is not located in an area where mud flows occur.

e. **No Impact.** The Proposed Project does not include any water quality or groundwater management considerations.

XI. 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) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigation an environmental effect?	☐	☐	☐	☒

Discussion

a. **No Impact.** The Proposed Project area is located in the southern half of the unincorporated community of Orosi, County of Tulare.

b. **No Impact.** There are no conflicts between the Proposed Project and the Tulare County General Plan. The Proposed Project improvements will occur within an existing well site.

XII. 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 land use plan?	☐	☐	☐	☒

Discussion

a. **No Impact.** The Proposed Project is located within a California Mineral Land Classification System (CMLCS) Mineral Resource Zone (MRZ) or Aggregate Resource Area (ARA) study area as documented by the California Geological Survey Information Warehouse. The Tulare County General Plan (2012) however, does not include the Proposed Project site with its recognized Mineral Resource Zone (Figure 8-2). The Proposed Project is located on an existing well site and will not result in a loss of mineral resources.

b. **No Impact.** The Project Location is not delineated on Tulare County's General Plan as a locally important mineral resource recovery site. The Proposed Project is located on an existing well site and does not impact any resource recovery site.

XIII. NOISE

Would the project in:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne 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?	☐	☐	☐	☒

XII. NOISE (continued)

Discussion

a. **Less than Significant Impact.** During construction, the potential exists for noise to occur in excess of the Tulare County's General Plan standards. The Project's construction specifications will require construction activities to follow all applicable laws and limit noise generation. Due to the rural location and proximity to Avenue 413 and State Hwy 63 of the Proposed Project area, any noise created by construction would be consistent with that of the surrounding area and would not adversely impact adjacent residents. Upon completion, the Proposed Project will not cause an increase in existing noise levels.

b. **Less than Significant Impact.** The potential for construction-related vibrations exists. Due to the rural location and agricultural nature of the Proposed Project area, vibration resulting from construction would be consistent with that from existing vehicular traffic and well site operation and would not adversely impact adjacent residents. Upon completion, the Proposed Project will not cause an increase in existing vibration levels.

c. **No Impact.** The Proposed Project site is not located within an airport land use plan. The nearest airstrip, is approximately 6.2 miles southwest of a portion of the Proposed Project (Sequoia Field).

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

Discussion

a. **No Impact.** The scope of Proposed Project consists of improvements that will improve water supply reliability and maintain existing water supplies. The Proposed Project does not provide water supply to support population growth. The potential exists that additional building (housing) could occur on parcels within the Urban Development Boundary (UDB) of the community based upon available water supply capacity. The current available water capacity will limit population growth.

b. **No Impact.** The Proposed Project occurs on District-owned land that does not include housing features. The Proposed Project does not result in the displacement of any people. The Proposed Project will not necessitate the construction of replacement housing.

XV. PUBLIC SERVICES

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) 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?	☐	☐	☐	☒

Discussion

No Impact. The District's domestic water supply facilities represent the only public services affected by the Proposed Project. Construction will occur on the existing well site and will not result in adverse physical impacts. No changes to service ratios, service times or other public service performance objectives will occur. The Proposed Project will improve water supply delivery capabilities. Sufficient water supply capacity exists to prevent adverse environmental effects during the construction of improvements. Construction sequencing of improvements will also be used to minimize any potential impacts during construction.

XVI. RECREATION	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?	☐	☐	☐	☒

Discussion

a. **No Impact.** The Proposed Project does not include any changes to the existing water supply or water system that would result in an increase in use of existing parks or recreational facilities.

b. **No Impact.** The Proposed Project does not include or require expansion of any recreational facilities.

XVII. TRANSPORTATION/TRAFFIC **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☒
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b) (Criteria for Analyzing Transportation Impacts).	☐	☐	☐	☒
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?	☐	☐	☐	☒

Discussion

a. **No Impact.** The Proposed Project does not include any transportation related elements. The standby generator and booster pumps will be installed adjacent to existing structures in areas set aside for the specified purpose. All construction activities will be performed within District owned land.

b. **No Impact.** The Proposed Project does not conflict with CEQA Guidelines § 15064.3 (b). The Proposed Project does not represent a Land Use or Transportation Project. The construction of the Proposed Project can be accomplished by local contractors which will minimize the vehicle miles traveled.

c. **No Impact.** The Proposed Project does not include any features that will increase hazards. New facilities will be constructed on District-owned land which uses security fencing along the perimeter.

d. **No Impact.** The Proposed Project will not result in the alteration of the present access in the Proposed Project area. Therefore, existing emergency access would be maintained.

XVIII. TRIBAL CULTURAL RESOURCES

Would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 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 Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒

Discussion

a(i). **No Impact.** The cultural resources survey completed for the Proposed Project (Item V) did not identify a listed or eligible for listing tribal cultural resource within the Project area. The cultural resources survey is attached as Appendix D.

a(ii). **No Impact.** The cultural resources survey completed for the Proposed Project (Item V) did not identify any tribal cultural resource having significance with the Project area. The cultural resources survey is attached as Appendix D.

XIX. UTILITIES AND SERVICE SYSTEMS **Would the project:**	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably forseeable 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 reduction goals?	☐	☐	☐	☒
e) Comply with federal, state, and local management and reduction statutes and regulations to solid waste?	☐	☐	☐	☒

XIX. UTILITIES AND SERVICE SYSTEMS (continued)

Discussion

a. **No Impact.** The Proposed Project consists of installing a standby generator and booster pumps at an existing well site. The Proposed Project will not change the conditions of the Project area.

b. **No Impact.** The elements of the Proposed Project include installation and operation of a standby generator and booster pumps that will support facilities that produce, store and pressurize existing domestic water supplies. The Proposed Project does not require a new water supply.

c. **No Impact.** The Proposed Project addresses domestic water delivery capabilities to meet existing water demands. The Proposed Project does not result in additional wastewater flows (demands).

d. **No Impact.** The Proposed Project does not result in a change in the solid waste generation or disposal of the existing facilities. The construction phase of the Proposed Project will generate a minor amount of solid waste on a temporary basis. Specifications will require proper handling and disposal of construction-related materials. In general, the construction-related materials (i.e., concrete, soil, etc.) can be recycled as erosion control material or in existing landfill facilities as daily cover.

e. **No Impact.** Specifications will require proper handling and disposal of construction-related materials.

XX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant With Mitigation Incorporation	Less than Significant Impact	No Impact
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 uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, powerlines 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?	☐	☐	☐	☒

Discussion

The Proposed Project area does not lie within a Fire Hazard Severity Zone of a State Responsibility Area.

a. **No Impact.** Construction requirements will maintain open roadways and access routes. Consequently, evacuation routes and emergency response routes would not be impacted.

b. **No Impact.** The operation of the Proposed Project will not exacerbate wildfire risks. The Proposed Project is not located within a high fire hazard severity zone. Construction activities do not present an increase in wildfire risks.

c. **No Impact.** The Proposed Project consists of installing new facilities within existing an existing site. No new infrastructure is required. No new roads or fuel breaks will be required.

d. **No Impact.** The Proposed Project is not located within a high fire hazard severity zone. The topography is relatively flat that does not present significant risks associated with landslides or downstream flooding.

XXI. 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. **Less Than Significant Impact.** As described in the previous sections, the Proposed Project will not result in any significant adverse impacts. Short-term related impacts that might occur during construction will be mitigated to a less than significant level based on Proposed Project design and/or construction specification requirements.

b. **No Impact.** The Proposed Project is not part of a past or future project. No projects or associated elements have been identified that rely on the completion of the Proposed Project. Therefore, the individual considerations of the Proposed Project and their described potential impacts do not have related impacts that need to be collectively analyzed as part of other projects.

c. **No Impact.** No direct or indirect adverse effects on the human population have been identified through the completion of this Initial Study.

APPENDIX A

PROPOSED PROJECT LOCATION MAPS

WELL NO. 5A AUXILIARY POWER AND PUMPS PROJECT

OROSI PUBLIC UTILITY DISTRICT

L:\7068 OPUD - WELL 5A AUXILIARY POWER PROJECT - 2025\CEQA\FIGURE 1.dwg



N

SCALE: 1" = 2,000'

PROJECT LOCATION

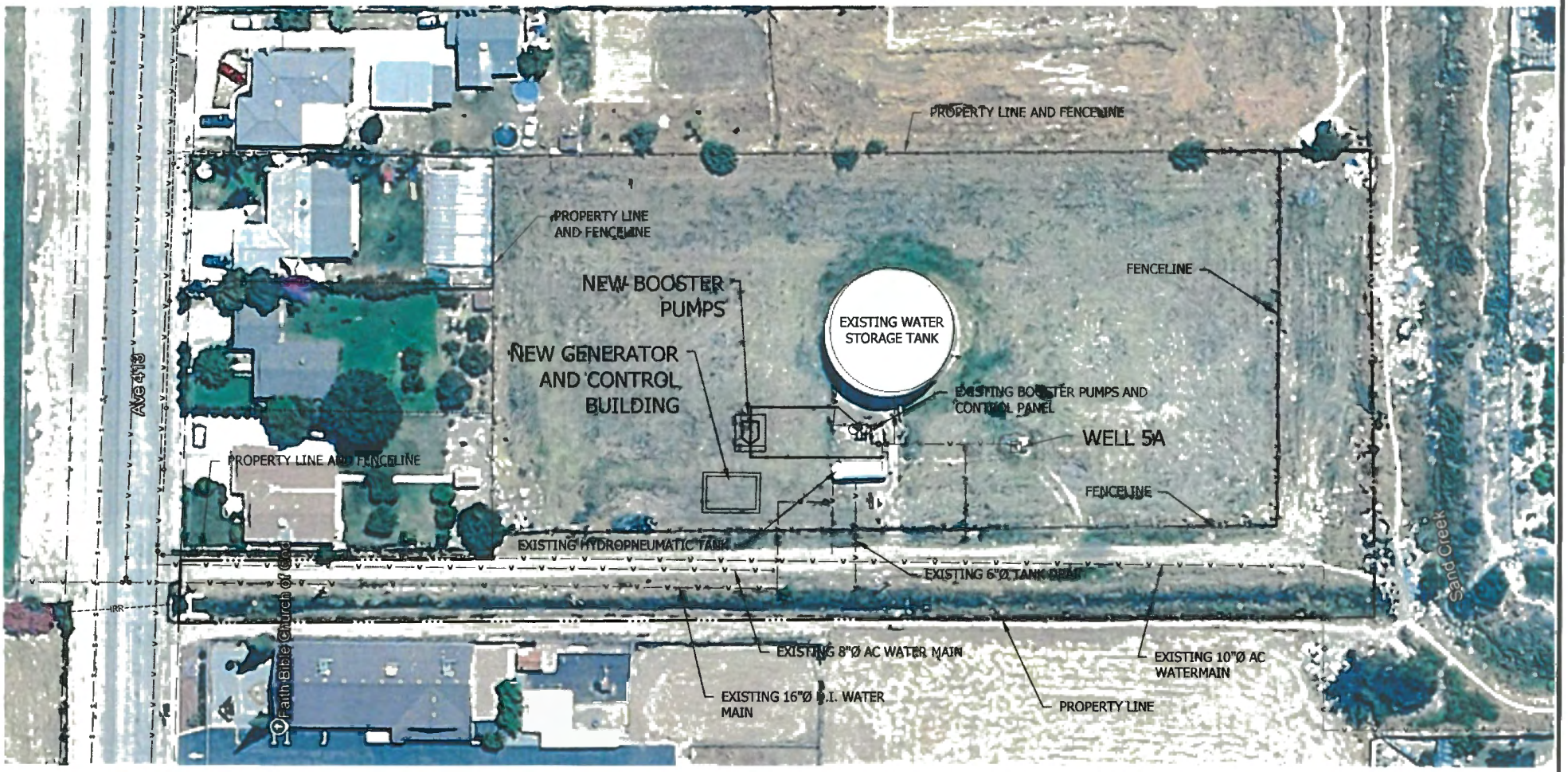
WELL NO. 5A AUXILIARY POWER AND PUMPS PROJECT

OROSI PUBLIC UTILITY DISTRICT

FIGURE 1

DRK, CCE, INC.

L:\7068 OPUD - WELL 5A AUXILIARY POWER PROJECT - 2025\CEQA\FIGURE 2 80 SCALE.dwg



SCALE: 1" = 80'

PROJECT LOCATION

WELL NO. 5A AUXILIARY POWER AND PUMPS PROJECT

OROSI PUBLIC UTILITY DISTRICT

FIGURE 2

DRK, CCE, INC.

APPENDIX B

AIR EMISSIONS/GREENHOUSE GASES ESTIMATES

WELL NO. 5A AUXILIARY POWER AND PUMPS PROJECT

OROSI PUBLIC UTILITY DISTRICT

ESTIMATED EMISSIONS
WELL NO. 5A AUXILIARY POWER AND PUMPS
OROSI PUBLIC UTILITY DISTRICT

The estimated Project construction and operational air emissions are summarized below. The emission estimates were generated using the California Emissions Estimator Model (CalEEMod) version 2016.3.2. based upon the installation of a 500 kW standby diesel generator, enclosure/building, three (3) booster pumps and associated electrical improvement at the District's Well No. 5A site construction schedule. The full CalEEMod emissions estimate report is available for review at the District office.

Pollutant	Federal Status (Attainment, Nonattainment or Unclassified)	Nonattainment Rates (Marginal, Moderate, Serious, Severe or Extreme)	Threshold of Significance for the Area (if applicable (Tons/Year) (1)	Construction Emissions (Tons/Year)	Operations Emissions (Tons/Year) (2)
Carbon Monoxide (CO)	Attainment	NA	100	0.43	0.54
Ozone (O_3)	Nonattainment	Extreme	10 (EPA De Minimis)	Unknown (Note 3)	Unknown (Note 3)
Oxides of Nitrogen (NO_x)	Unknown	-	10	0.33	0.56
Particulate Matter (PM_{10})	Attainment	NA	15	0.02	0.16
Reactive Organic Gases (ROG)	Unknown	-	10	0.17	0.4
Sulfur Dioxide (SO_2)	Attainment	NA	100 (EPA De Minimis)	0.0008	0.19
Volatile Organic Compounds (VOC)	Unknown	-	50 (EPA De Minimis)	Unknown (Note 3)	Unknown (Note 3)
Particulate Matter ($PM_{2.5}$)	Nonattainment	Serious	15	0.02	0.05
CO2e (Greenhouse Effect)	Does not apply	-	10,000 Metric Tons (California Air Resources Board)	69	304
Lead (Pb)	Attainment	NA	25 (EPA De Minimis)	Unknown (Note 3)	Unknown (Note 3)

Notes:

1. San Joaquin Valley Air Pollution Control District adopted thresholds, unless otherwise noted.
2. Results reflect CalEEMod general light industry land use. The Project consists of 500 kw generator and booster pump operations.
3. Not calculated by CalEEMod.

APPENDIX C

BIOLOGICAL RESOURCES LETTER

WELL NO. 5A AUXILIARY POWER AND PUMPS PROJECT

OROSI PUBLIC UTILITY DISTRICT

LIVE OAK
ASSOCIATES, INC.

November 24, 2025

Dennis Keller
District Engineer
Orosi Public Utility District
12488 Avenue 416
Orosi, CA 93647

RE: Biological Evaluation Letter, Orosi Public Utility District Well 5A Auxiliary Power Project, Orosi, CA

Dear Mr. Keller:

This letter report summarizes a biological evaluation conducted by Live Oak Associates, Inc. (LOA) for an approximately 2-acre site ("study area") proposed for the Orosi Public Utility District Well 5A Auxiliary Power Project ("project"). The study area is located in Tulare County, in the community of Orosi, 500 feet west of Road 127, and approximately 300 feet south of Avenue 413 (Figure 1). It can be found on the *Orange Cove South* U.S. Geological Survey (USGS) 7.5-minute quadrangle within Section 18 of Township 16 South, Range 25 East (Figure 2).

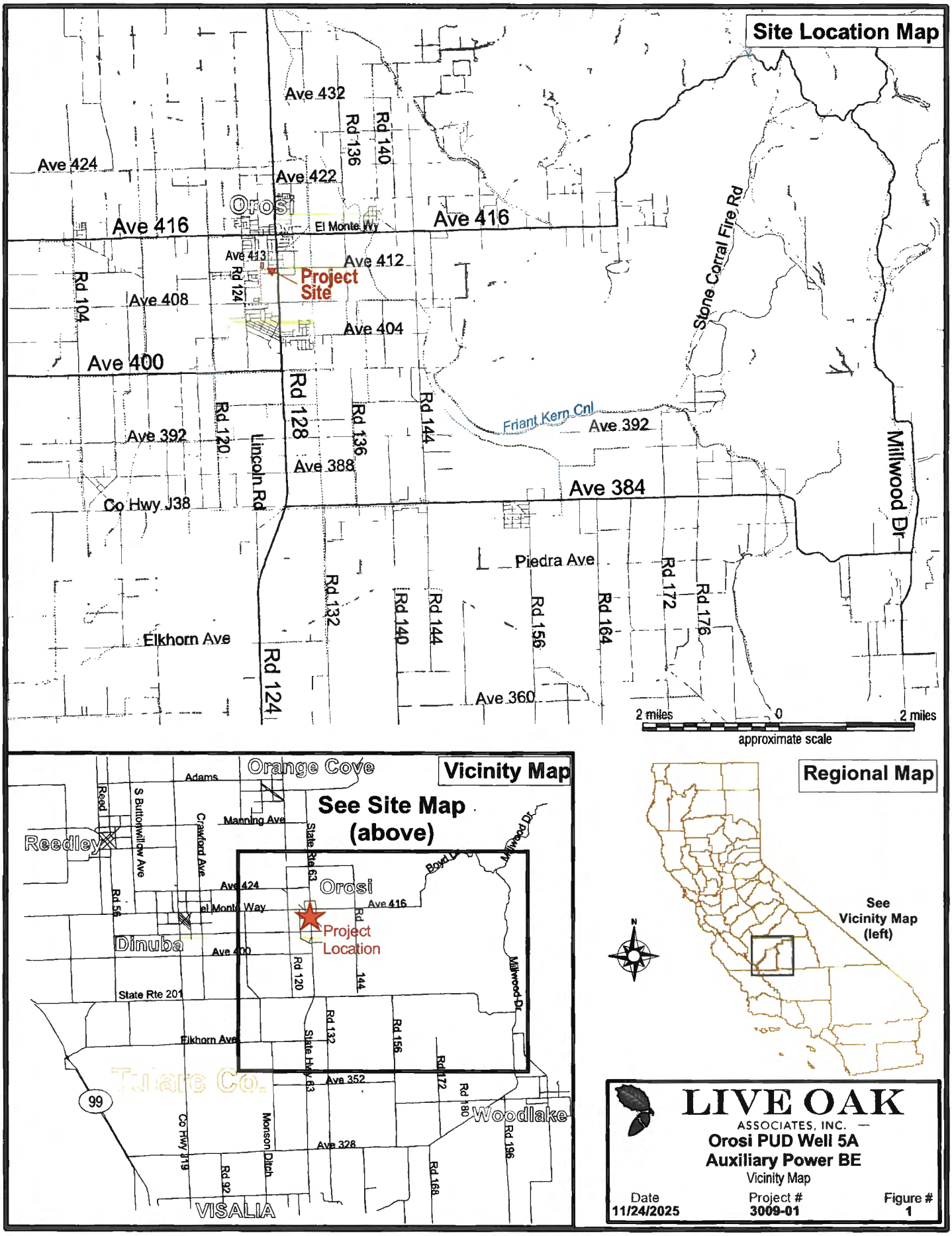
On October 31, 2025, LOA biologist Jeff Gurule surveyed the site for its habitat values, flora and fauna, and potential to support special status species and other sensitive biological resources. As follows is a brief description of the proposed project and study area, a discussion of potential impacts to biological resources that may result from site development, and recommended mitigations for biological impacts that would be considered significant under the California Environmental Quality Act (CEQA).

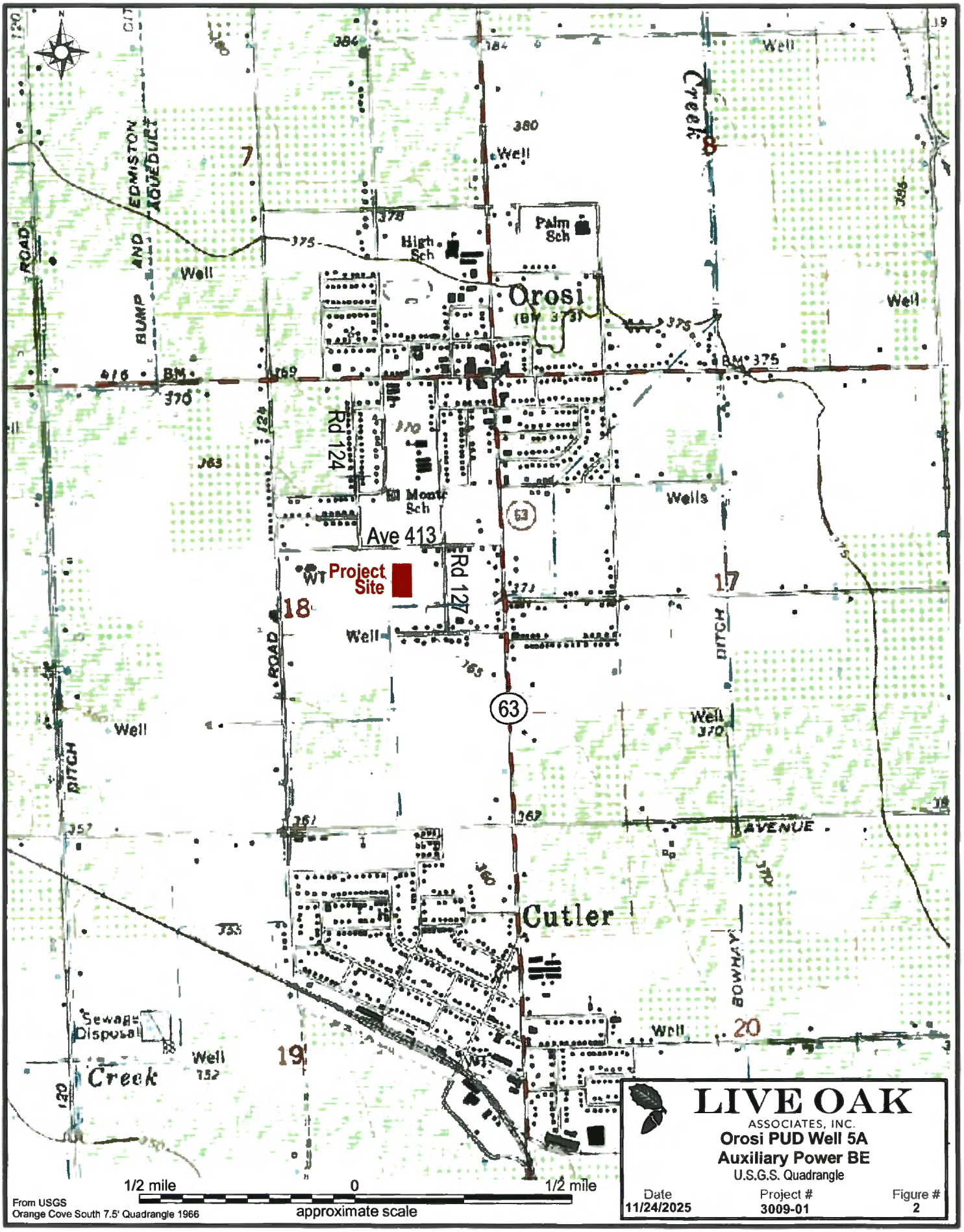
Project Description

The project will entail the installation of a new standby generator and construction of an associated control building presumably housing the generator and control panels at the existing Orosi Public Utility District Well 5A compound. The footprint of the proposed structure is approximately 600 square feet, located within an existing chain link perimeter fence around the compound.

Site Description and Conditions

To account for project staging, lay down, and turnaround areas, the entire area enclosed by the chain link fence is included in the study area. The study area consists of a ruderal lot with an existing water storage tank, booster pumps, hydropneumatic tank, control panel, and well. It is enclosed with chain link fencing and located within a residential area of Orosi. Based on historic aerial imagery, the lot has been fenced and used as a well and water storage site since at least the mid-1980s, and appears to experience regular vegetation management in the form of discing. Photos of the site taken during the site survey are presented in Attachment 1.


Site Location Map
Ave 432
Rd 136
Rd 140
Ave 424
Ave 422
Orosi
Ave 416
El Monte Wy
Ave 416
Ave 413
Rd 124
Ave 412
Project Site
Rd 104
Ave 408
Ave 404
Ave 400
Rd 128
Rd 136
Rd 144
Stone Corral Fire Rd
Friant Kern Cnl
Ave 392
Rd 120
Lincoln Rd
Ave 392
Ave 388
Millwood Dr
Co Hwy J38
Ave 384
Piedra Ave
Rd 132
Rd 140
Rd 144
Rd 156
Rd 164
Rd 172
Rd 176
Elkhorn Ave
Rd 124
Ave 360
2 miles
0
2 miles
approximate scale
Vicinity Map
Orange Cove
Adams
Reed
S Buttonwillow Ave
Crawford Ave
Manning Ave
State Rte 63
See Site Map (above)
Reedley
Orosi
Ave 424
el Monte Way
Ave 416
Project Location
Dinuba
Ave 400
Rd 120
144
State Rte 201
Elkhorn Ave
Rd 132
Rd 156
Rd 172
Ave 352
Tulare Co.
99
Co Hwy J19
Monson Ditch
Rd 180
Woodlake
Rd 196
Ave 328
Rd 168
Rd 92
VISALIA
Regional Map
See Vicinity Map (left)
N
LIVE OAK
ASSOCIATES, INC.
Orosi PUD Well 5A
Auxiliary Power BE
Vicinity Map
Date
11/24/2025
Project #
3009-01
Figure #
1



LIVE OAK

ASSOCIATES, INC.

Orosi PUD Well 5A

Auxiliary Power BE

U.S.G.S. Quadrangle

Date	Project #	Figure #
11/24/2025	3009-01	2

The site has level topography and sits at an elevation of around 370 feet above sea level. It contains one soil mapping unit: Exeter loam, 0 to 2 percent slopes. This soil mapping unit is not considered a hydric soil, meaning the soil would not be prone to wetland development. Soils of the site have been historically disturbed from past uses of the site.

The study area is situated in an urban landscape associated with Orosi and adjacent community of Cutler, with agricultural development surrounding both these urban areas. Immediately surrounding lands consist of vacant lots, irrigation ditches, residential development, and a church facility.

One habitat/land use type, categorized as ruderal, was identified on the study area at the time of the field survey, as seen on the aerial photo in Figure 3. The site consisted of a disturbed lot, with a small area of existing water system infrastructure, supporting primarily non-native weedy herbaceous vegetation. Observed vegetation included grasses such as ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), Johnsongrass (*Sorghum halepense*), and forbs such as prickly lettuce (*Lactuca serriola*), alkali mallow (*Malvella leprosa*), bindweed (*Convolvulus arvensis*), Jimsonweed (*Datura wrightii*), and Russian thistle (*Salsola tragus*), among others. A patch of agave (*Agave sp.*) plants were located along the western fenceline and a few ornamental trees observed along the eastern fenceline.

The study area has limited value for native wildlife due to the urban landscape in which it is situated, little vegetation cover, and perimeter fence; however, common disturbance tolerant species are expected to utilize the site. Reptiles on the site would likely be limited to western fence lizards (*Sceloporus occidentalis*). Birds observed on or near the site include the white crowned sparrow (*Zonotrichia leucophrys*), mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), and common raven (*Corvus corax*). Small mammals such as California ground squirrels (*Otospermophilus beecheyi*) and Botta's pocket gophers (*Thomomys bottae*) could also utilize the study area, though ground squirrel burrows were not observed. Due to the fencing around the site, mammalian predators are unlikely to forage or pass through the study area.

Special Status Species

Many species of plants and animals within the state of California have low populations, limited distributions, or both. 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 residential uses. 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 (i.e., California Rare Plant Ranks, or CRPR) of native plants considered rare, threatened, or endangered (CNPS 2025). Collectively, these plants and animals are referred to as "special status species."

The California Natural Diversity Data Base (CNDDB; CDFW 2025) was used to query special status species occurrences in the *Orange Cove South* U.S. Geological Survey 7.5-minute quadrangle, in which the site is situated. The CNDDB species list is presented in Attachment 2.

Jurisdictional Waters

Jurisdictional waters are those rivers, creeks, drainages, lakes, ponds, reservoirs, and wetlands that are subject to the authority of the U.S. Army Corps of Engineers (USACE), CDFW, and/or the Regional Water



LIVE OAK ASSOCIATES, INC.

Orosi PUD Well 5A
Auxiliary Power BE
U.S.G.S. Quadrangle

Date	Project #	Figure #
11/24/2025	3009-01	3

Quality Control Board (RWQCB). In general, the USACE regulates navigable waters, tributaries to navigable waters, and wetlands with a continuous surface connection to such waters with a relatively permanent flow, where wetlands are defined by the presence of hydric soils, hydrophytic vegetation, and wetland hydrology. All waters under USACE jurisdiction are also regulated by the RWQCB as waters of the State. Additionally, the RWQCB asserts jurisdiction over certain isolated features outside the jurisdiction of the USACE. The CDFW has jurisdiction over waters that have a defined bed and bank.

Aquatic features, including any potentially jurisdictional waters or wetlands, are absent from the study area.

Sensitive Habitats and Designated Critical Habitat

California contains a wide range of natural communities, or unique assemblages of plants and animals. These communities have largely been classified and mapped by CDFW as part of their Vegetation Classification and Mapping Program (VegCAMP). Natural communities are assigned state and global ranks according to their rarity and the magnitude and trend of the threats they face. Any natural community with a state rank of 3 or lower (on a 1 to 5 scale) is considered "sensitive" and must be considered in CEQA review.

Sensitive natural communities are absent from the study area.

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.

Wildlife movement corridors are absent from the study area.

Local Policies and Ordinances

In compliance with CEQA, the lead agency must consider project conformance with applicable goals and policies of the General Plan of the County of Tulare. The General Plan of the County of Tulare was adopted in August 2012 and has a planning horizon that extends through 2030. Relevant biological policies are as follows:

- Preserve and enhance scenic landscapes of Tulare County;
- Ensure that development occurs in a manner that limits impacts to natural and cultural resources and avoid developing in naturally and culturally sensitive areas when possible;
- Support continued preservation of natural lands;
- Protect environmental waters;
- Preserve and protect sensitive significant habitats, enhance biodiversity, and promote healthy ecosystems;
- Protect rare and endangered species;
- Protect and preserve wetland and riparian habitats;
- Plant native trees, shrubs, and grasslands to provide suitable habitat for native wildlife;
- Conserve and manage oak woodland communities;
- Require that projects be surveyed by a biologist for special status species.

The project does not appear to be in conflict with these policies.

Habitat Conservation Plans and Natural Community Conservation Plans

Section 10 of the federal Endangered Species Act establishes a process by which non-federal projects can obtain authorization to incidentally take listed species, provided take is minimized and thoroughly mitigated. A Habitat Conservation Plan (HCP), developed by the project applicant in collaboration with the USFWS and/or NMFS, ensures that such minimization and mitigation will occur, and is a prerequisite to the issuance of a federal incidental take permit. Similarly, a Natural Community Conservation Plan (NCCP), developed by the project applicant in collaboration with CDFW, provides for the conservation of biodiversity within a project area, and permits limited incidental take of state-listed species.

No HCPs or NCCPs are in effect on the study area and on lands in the project vicinity.

Potentially Significant Project Impacts/Mitigation

Nesting Migratory Birds and Raptors

Impact: The study area contains possible nesting habitat for a few migratory bird species and there is some nesting habitat in the vicinity for raptors (birds of prey). Nearly all avian species are protected under the Migratory Bird Treaty Act and related state laws. Avian species potentially nesting on or immediately adjacent to the site include the Brewer's blackbird (*Euphagus cyanocephalus*), California scrub jay (*Aphelocoma californica*), killdeer (*Charadrius vociferus*), and northern mockingbird (*Mimus polyglottos*), among others. If birds were to nest on or immediately adjacent to project disturbance areas at the time of construction, project-related activities could result in the destruction or abandonment of active nests. Construction activities that adversely affect the nesting success of avian species or result in the mortality of individual birds may violate state and federal laws and would be considered a significant impact under CEQA.

Mitigation: In order to avoid impacts to migratory birds and raptors, construction will occur, where possible, outside the nesting season, which is considered February 1 – August 31. If construction must occur during the nesting season, a qualified biologist will conduct preconstruction surveys for active avian nests within 7 days of the onset of these activities. Nest surveys will include all areas on and within 250 feet of project disturbance areas. Should any active nests be discovered in or near proposed construction zones, the biologist will identify a suitable construction-free buffer around the nest. This buffer will be identified on the ground by flagging or fencing and will be maintained until a qualified biologist has determined that the young have fledged.

Compliance with the above mitigation measures would reduce impacts to nesting birds to a less than significant level under CEQA and facilitate compliance with state and federal laws.

Less Than Significant Project Impacts

Special Status Plants: Decades of human use and disturbance of the study area have resulted in unsuitable habitat conditions for special status plants. The project is not expected to affect individuals or regional populations of special status plants because they have no potential to occur on site. Impacts to special status plants are considered less than significant under CEQA and mitigation is not warranted.

Special Status Animal Species. Decades of human use and disturbance of the study area and surrounding lands have resulted in unsuitable habitat conditions for regionally occurring special status animal species. The project is not expected to affect individuals or regional populations of special status animals because they have no appreciable potential to occur on the site. Impacts to special status animals are considered less than significant under CEQA and mitigation is not warranted.

Waters of the U.S. and State. Hydrologic features are absent from the study area. As a result, project impacts to waters of the U.S. and State are considered less than significant under CEQA and mitigation is not warranted.

Wildlife Movement Corridors. The study area does not contain any geographical features that could function as a wildlife movement corridor. Furthermore, the study area is completely enclosed with chain-link fencing, thereby eliminating the potential for larger mammals to move through the site. Project impacts to wildlife movement corridors are considered less than significant under CEQA and mitigation is not warranted.

Consistency with Local Policies and Ordinances. The project appears consistent with the General Plan of the County of Tulare and other local policies and ordinances related to biological resources. No mitigations are warranted.

Consistency with Habitat Conservation Plans and Natural Community Conservation Plans. There are no known HCPs or NCCPs in effect for the project area. No mitigations are warranted.

Conclusion

Based on LOA's field survey and subsequent analysis, the Orosi Public Utility District Well No. 6 Improvements Project has the potential to impact nesting birds and raptors, which would be a potentially significant impact under CEQA. This potential impact can be mitigated to a less than significant level by conducting preconstruction surveys and maintaining construction-free buffers around active nests. Potential project impacts to all other biological resources are considered less than significant under CEQA.

If you have any questions, please do not hesitate to contact me at apearson@loainc.com or (559) 760-3065.

Sincerely,

Austin Pearson

Austin Pearson
Vice President

ATTACHMENT 1: PHOTOGRAPHS OF THE STUDY AREA



Photo 1: Looking east at the approximate location of the proposed generator and building installation within the study area.



Photo 2: Looking southeast at the study area from the access road.



Photo 3: Looking northeast at the study area. Access road at left, residential area in background.

ATTACHMENT 2:
CNDDB SPECIES LIST

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Orange Cove South (3611953))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	AAAAA01181	Threatened	Threatened	G3T3	S3	WL
Athene cunicularia burrowing owl	ABNSB10010	None	Candidate Endangered	G4	S2	SSC
Bombus morrisoni Morrison bumble bee	IIHYM24460	None	None	G3	S1S2	
Bombus pensylvanicus American bumble bee	IIHYM24260	None	None	G3G4	S2	
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Eryngium spinosepalum spiny-sepaled button-celery	PDAPI0Z0Y0	None	None	G2	S2	1B.2
Helianthus winteri Winter's sunflower	PDAST4N260	None	None	G2?	S2?	1B.2
Lasiurus cinereus hoary bat	AMACC05032	None	None	G3G4	S4	
Lasthenia glabrata ssp. coulteri Coulter's goldfields	PDAST5L0A1	None	None	G4T2	S2	1B.1
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G3	S3	
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Lytta molesta molestan blister beetle	IICOL4C030	None	None	G2	S2	
Pseudobahia peirsonii San Joaquin adobe sunburst	PDAST7P030	Threatened	Endangered	G1	S1	1B.1
Sagittaria sanfordii Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
Spea hammondii western spadefoot	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC
Talanites moodyae Moody's gnaphosid spider	ILARA98020	None	None	G2G3	S2S3	

Record Count: 16

APPENDIX D

CULTURAL RESOURCES REPORT

WELL NO. 5A AUXILIARY POWER AND PUMPS PROJECT

OROSI PUBLIC UTILITY DISTRICT

Statewide in Sacramento, Pasadena, Bakersfield,
and Corporate Headquarters: 1322 E. Shaw Avenue #400,
Fresno, California

Cultural Resources Assessment
Orosi Public Utility District Well 5A Auxiliary Power and Pumps Project, Orosi, CA 93647
Assessor Parcel Number 023-160-040
Tulare County, California

Prepared for

Orosi Public Utility District
12488 Avenue 416
Orosi, CA 93647

Prepared by

1322 E Shaw Ave.
Fresno, CA 93710

Julie Federico, M.A., RPA, Archaeologist
Heather Froshour, M.A., RPA, Principal Archaeologist

March 2026

EXECUTIVE SUMMARY

Soar Environmental Consulting, Inc. (Soar) has been retained by Dennis R. Keller Consulting Civil Engineer, Inc. (Client), the consulting engineer for the Orosi Public Utility District (OPUD), to prepare a Cultural Resources Assessment (CRA) for the Well 5A Auxiliary Power and Pumps Project. The proposed project is to install a new standby generator and construct an associated enclosure on the 2.45-acre parcel at Assessor Parcel Number (APN) 023-160-040. The purpose of the CRA is to provide an inventory of the known and potentially significant cultural resources within the Project area through a California Historical Records Information Search (CHRIS) using the Southern San Joaquin Valley Information Center (SSJVIC), as well as a Sacred Lands File (SLF) & Native American Contacts List Request through the Native American Heritage Commission (NAHC).

The results of the records search indicate one cultural resource recorded within 0.50 miles of the Project area. The records searches indicate no recorded resources within the Project area. The pedestrian survey identified no existing resources within the Project area. No site testing or mitigation measures are required, unless previously undiscovered cultural resources are detected during construction.

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1.0 INTRODUCTION

This report details the results of a Cultural Resources Assessment (CRA) prepared in support of the proposed Well 5A Auxiliary Power and Pumps Project (Project) in the census-designated place of Orosi (Orosi), Tulare County, California. The Project encompasses 2.45 acres on Assessor's Parcel Number (APN) 023-160-040 (Figure 1). This report has been prepared pursuant to the California Environmental Quality Act (CEQA), Public Resources Code (PRC) Sections 21082, 21083.2, and 21084.1, and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15064.5).

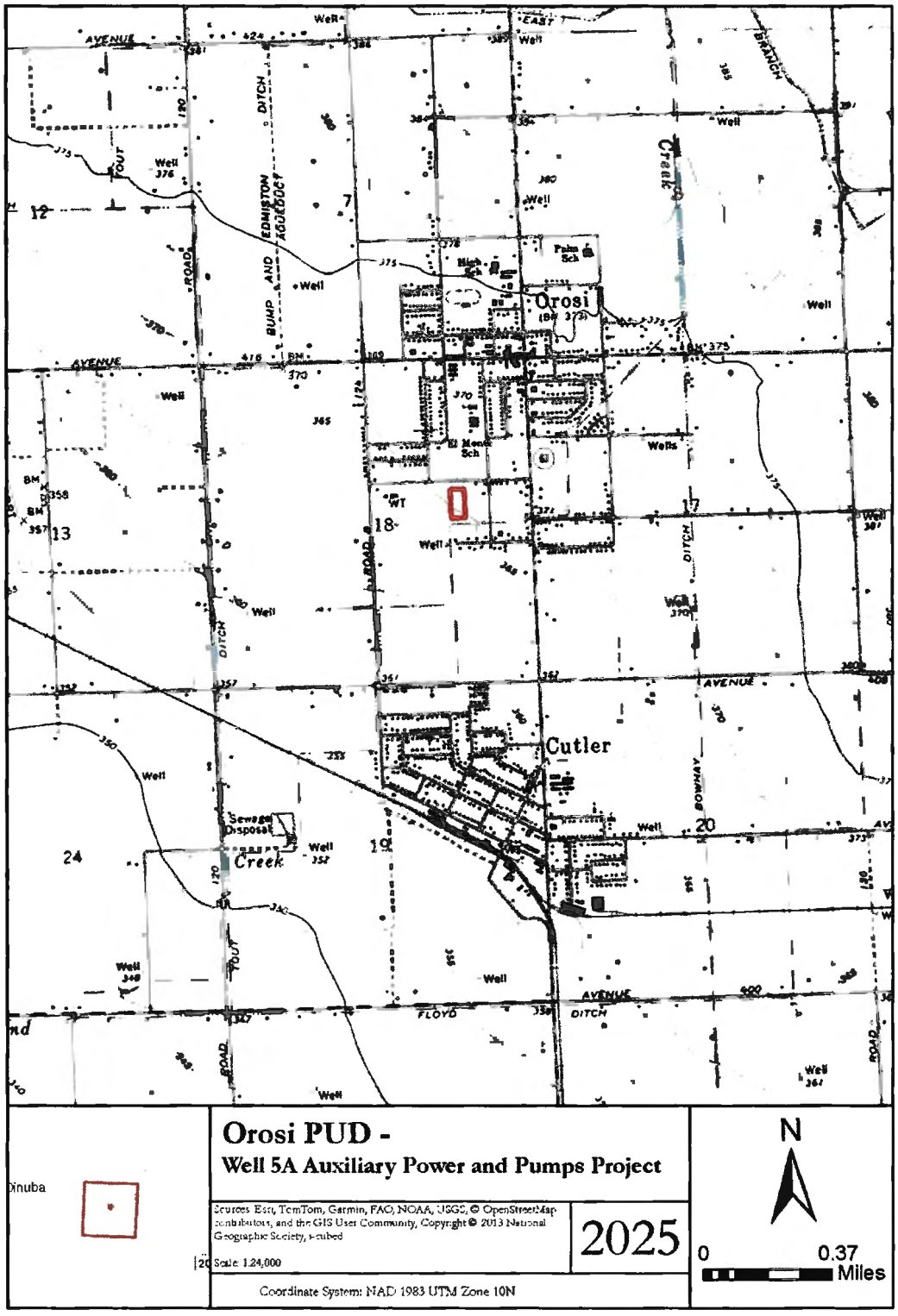
Heather Froshour completed the Native American consultation and field survey and assisted in the preparation of this Phase 1 report. Julie Federico assisted with the field survey and prepared this Phase 1 report. Ms. Froshour is Soar Environmental's Principal Archaeologist, who meets the professional standards of the U.S. Secretary of the Interior for Archaeology (36 CFR 61) and is certified by the Register of Professional Archaeologists. Ms. Federico is a Soar Archaeologist with a background in Anthropology and is certified by the Register of Professional Archaeologists.

Soar Environmental requested a records search from the Southern San Joaquin Valley Information Center (SSJVIC) for the Project area and a 0.50-mile buffer. The archival research for this Phase 1 report was negative for archaeological sites or historical resources within the Project area. The archival record search reported one recorded resource within a 0.5-mile radius of the Project area. The records search revealed that no previous cultural resources surveys have been conducted in the Project area. Nine (9) additional cultural resource survey reports have been completed within a 0.50-mile radius of the Project area.

As part of the background research, Soar Environmental also requested a search of the Sacred Lands File (SLF) from the Native American Heritage Commission (NAHC). The results of the records review and SLF search were negative. The NAHC suggested contacting eight individuals representing five Native American tribal groups to determine whether they have additional information about the Project area. Soar Environmental sent outreach letters to all five recommended tribal individuals. No response was received.

Soar Environmental conducted an intensive pedestrian survey of the project on December 10, 2025. This field survey was negative for surface archaeological resources within the Project area. As currently designed, the proposed project will not impact any known in situ archaeological sites or historical resources.

Figure 1. Project Location Map



Project area is located in Orosi, CA, Tulare County, Assessor Parcel Number (APNs) 023-160-040.

1.1 Project Location

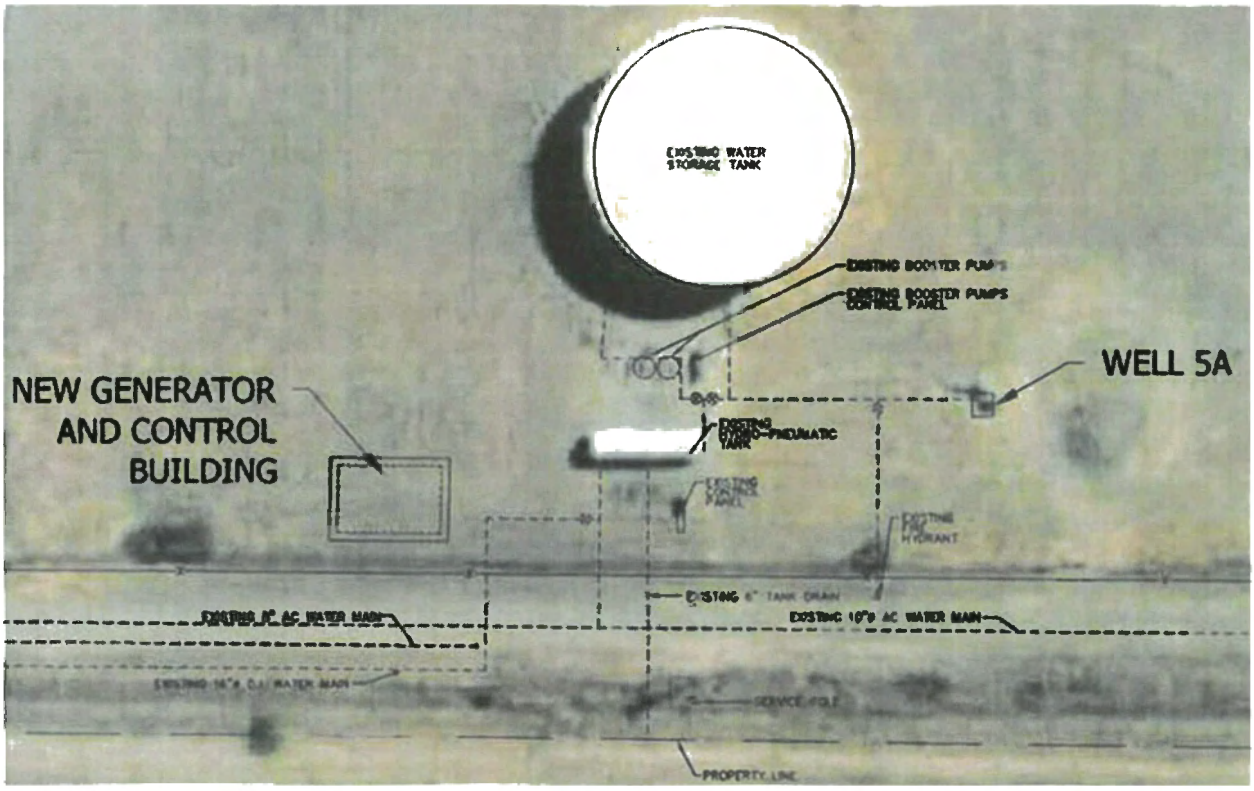
The Project area is located in the Southern San Joaquin Valley, on a 2.45-acre parcel (Assessor Parcel Number [APN] 023-160-040), approximately 390 meters west of State Route (SR) 63, which passes directly through Orosi, California, and 15 miles east of SR 99. The Project area is approximately 4.3 miles west of Long Creek and 11 miles east of the Kings River. The Project area is located in Tulare County within Section 18, Township 16S, Range 25E, Mount Diablo Base Meridian, as depicted on the *Orange Cove South, California* 7.5' U.S. Geological Survey (USGS) topographical quadrangle (Figure 1).

The well site on the project APN is actively maintained and includes a well, booster pumps, a booster pump control panel, a hydro-pneumatic tank, and an above-ground storage tank.

1.2 Project Description

The Project proposes installing a new standby generator and control building in the census-designated area of Orosi (Figure 2). The proposed construction is located on the 2.45-acre parcel under APN 023-160-040. The proposed project is situated on the *Orange Cove South, California*, USGS 7.5' Series Quadrangle, T16S, R25E, S18. Construction will take place on a dedicated well site that has been in use since the early 1980s. Ground disturbance will include discing, grading, and utility trenching within the Project area.

Figure 2. Site Plan



Site plan for proposed development

2.0 REGULATORY SETTING

Federal, state, and local governments have developed laws and regulations designed to protect significant cultural resources that may be affected by actions that they undertake or regulate. The National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA) are the basic federal and state laws governing preservation of historic and archaeological resources of national, regional, state, and local significance.

2.1 Federal

Federal regulations governing cultural resources are primarily governed by Section 106 of the National Historic Preservation Act (NHPA) of 1966. Section 106 of the NHPA requires Federal agencies to consider the effects of their undertakings on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementing regulations, "Protection of Historic Properties," are found in 36 Code of Federal Regulations (CFR) Part 800. The goal of the Section 106 review process is to provide a measure of protection for sites determined eligible for listing on the National Register of Historic Places. The criteria for determining National Register eligibility are found in 36 CFR Part 60. Amendments to the NHPA (1986 and 1992) and subsequent revisions to the implementing regulations have, among other things, strengthened the provisions for Native American consultation and participation in the Section 106 review process. While federal agencies must follow federal regulations, most projects by private developers and landowners

do not require this level of compliance. Federal regulations only come into play in the private sector if a project requires a federal permit or if it uses federal money.

2.2 State

California Register of Historical Resources

In California, the term "historical resource" includes "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California PRC § 5020.1[j])(State of California 2021). In 1992, the California legislature established the California Register of Historical Resources (CRHR) "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (California PRC § 5024.1(a)). The criteria for listing resources on the CRHR, enumerated in the following text, were developed to be in accordance with previously established criteria developed for listing in the NRHP. According to California PRC § 5024.1(c) (1– 4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

2) Is associated with the lives of persons important in our past.

3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

4) Has yielded, or may be likely to yield, information important in prehistory or history.

To understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (14 CCR 4852[d][2]).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the National Register of Historic Places (NRHP), and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Health and Safety Code, §7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code, §7050.5, requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby

area reasonably suspected to contain human remains can occur until the County Coroner has examined the remains (California Health and Safety Code, §7050.5b). California PRC §5097.98 also outlines the process to be followed in the event that remains are discovered. If the County Coroner determines or has reason to believe the remains are those of a Native American, the County Coroner must contact the California NAHC within 24 hours (California Health and Safety Code, §7050.5c)(State of California 2021). The NAHC will notify the most likely descendant. With the permission of the landowner, the most likely descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the most likely descendant by the NAHC. The most likely descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

California State Assembly Bill 52

Assembly Bill (AB) 52 of 2014 amended California PRC § 5097.94, and added California PRC §21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 established that tribal cultural resources must be considered under CEQA and also provided for additional Native American consultation requirements for the lead agency. California PRC §21074 defines tribal cultural resources as follows:

(a) Section 21074 of the Public Resources Code states that "tribal cultural resources" are either of the following:

> (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
>
> > (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
> >
> > (B) Included in a local register of historical resources as defined in subdivision (k) of §5020.1.
>
> (2) 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 §5024.1. In applying the criteria set forth in subdivision (c) of §5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe. A cultural landscape that meets the criteria of subdivision:
>
> > (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
> >
> > (b) A historical resource described in §21084.1, a unique archaeological resource as defined in subdivision (g) of §21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of §21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

AB 52 formalizes the lead agency–tribal consultation process, requiring the lead agency to initiate

consultation with California Native American tribes located on the contact list maintained by the Native American Heritage Commission (NAHC). This includes California Native American groups that are traditionally and culturally affiliated with the project, including tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report (EIR).

Section 9 of AB 52 establishes that "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." Section 6 of AB 52 added §21080.3.2 to the California PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding Project alternatives, mitigation measures, or significant effects to tribal cultural resources, the consultation shall include those topics (California PRC §21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (California PRC §21082.3[a]).

Native American Human Remains

State law (California PRC §5097 et seq.) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NAHC.

In the event that Native American human remains or related cultural material are encountered, §15064.5(e) of the CEQA Guidelines (as incorporated from PRC §5097.98) and California Health and Safety Code, §7050.5, defines the subsequent protocol. In the event of the accidental discovery or recognition of any human remains, excavation or other disturbances shall be suspended on the site, or any nearby area reasonably suspected to overlie adjacent human remains or related material. Protocol requires that the County Coroner or County-approved Coroner be contacted in order to determine if the remains are of Native American origin. Should the coroner determine the remains to be Native American, the coroner must contact the NAHC within 24 hours. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work for means of treating, with appropriate dignity, the human remains, and any associated grave goods as provided in California PRC §5097.98 (14 CCR 15064.5(e))(State of California, 2021).

2.3 Local

Tulare County

Chapter 8.6 of the 2012 Tulare County General Plan promotes the preservation of cultural and historic resources by managing and protecting sites of cultural and archaeological importance for the benefit of present and future generations (Tulare County, 2012).

The following policies are outlined for the preservation of cultural resources:

ERM-6.1 Evaluation of Cultural and Archaeological Resources

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

ERM-6.2 Protection of Resources with Potential State or Federal Designations
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.

ERM-6.3 Alteration of Sites with Identified Cultural Resources
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.

ERM-6.4 Mitigation
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.

ERM-6.5 Cultural Resources Education Programs
The County should support local, State, and national education programs on cultural and archaeological resources.

ERM-6.6 Historic Structures and Sites
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.

ERM-6.7 Cooperation of Property Owners
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.

ERM-6.8 Solicit Input from Local Native Americans
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.

ERM-6.9 Confidentiality of Archaeological Sites
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.

ERM-6.10 Grading Cultural Resources Sites
The County shall ensure all grading activities conform to the County's Grading Ordinance and California Code of Regulations, Title 20, § 2501 et. seq.

3.0 SETTING

This section of the report summarizes information regarding the physical and cultural setting of the Project area, including the prehistoric, ethnographic, and historical context of the general area. Several factors, including topography, biological resources, and available water sources, affect the nature and distribution of the cultural periods of activity of an area. This background provides a context for understanding the nature of the cultural resources that may be identified within the region of the project.

3.1 Environmental Setting

The Project area is located at an elevation of approximately 390 feet (120 meters) above sea level, in the northwest part of Tulare County, bordering Fresno County. Orosi is located in the southwestern part of the San Joaquin Valley region, approximately 2.5 miles from the closest city's border of Dinuba, California.

Orosi is situated on the eastern edge of the San Joaquin Valley, a large, flat, and fertile agricultural area formed by a river basin and ancient seas. To the east of the valley, the land rises into the foothills of the Sierra Nevada, a massive mountain range with steep slopes and canyons. Rivers like the Kaweah River flow from the Sierra Nevada, carving deep canyons into the western slope and depositing sediment that has helped form alluvial fans and other fertile land throughout the valley. Near the foothills, sediment deposited by rivers creates alluvial fans, which are fan-shaped landforms that are often very fertile and used for agriculture. The high peaks of the Sierra Nevada, including Mt. Whitney, form the eastern boundary of the region and are characterized by glacial carving and rugged, mountainous terrain (Schoenherr, 1992).

The region's topography is greatly influenced by the interplay between active tectonics and gradational processes. The western edge of the San Joaquin Valley is characterized by a fold and fault belt in the Coast Ranges, while the valley floor itself is an asymmetric structural basin with a regional southward tilt. Sedimentation rates have historically equaled or exceeded tectonic subsidence rates, but human activities have altered the landscape dynamics (Schoenherr, 1992).

The Project area is located in the south-eastern part of the San Joaquin Valley. The Great Valley is an alluvial plain, about 50 miles wide and 400 miles long, located between the Coast Ranges and the Sierra Nevada. It is drained by the Sacramento and San Joaquin Rivers, which join and enter San Francisco Bay. To the north, the Sacramento Valley floodplain is interrupted by the Sutter (Marysville) Buttes, an isolated Plio-Pleistocene volcanic plug about 2,000 feet high. The valley is filled with nearly flat-lying sediments as much as 20,000 to 40,000 feet thick. Beneath the valley, Cretaceous and Cenozoic strata form a broad U-shaped cross-sectional profile (trough) that is steeper on the west than the east. The edges of the tilted layers of Great Valley sedimentary rock can be seen along the western margin of the

trough adjacent to the Coast Ranges. In the southern part of the Great Valley, the San Joaquin Valley oil fields follow uplifts and fault warps that formed "traps" for petroleum, such as those found in the Kettleman Hills.

The Great Valley has become one of the leading agricultural regions in the world due to a mild climate and extensive, fertile soils. These soils formed on wetlands as floodplain deposits replenished by sediment carried in the Sierran rivers during periodic, large floods. The floods and vast wetlands delayed the development of the Great Valley. To a large extent, the floods and the sediment are now cut off by flood control and water storage dams (Schoenherr, 1992).

Surface soils in the Project area are made up entirely of the Exeter loam soil series. The Exeter soil series consists of moderately deep to a duripan, moderately well-drained soils that formed in alluvium mainly from granitic sources. Exeter soils are on alluvial fans and stream terraces and have slopes of 0 to 9 percent. This soil is composed of brown loam at the surface, with dark yellowish-brown loam and reddish-brown sandy clay loam below, and extends at least 60 inches before reaching bedrock (United States Department of Agriculture, 1980).

Figure 3. Soil Map



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Map Unit Symbol	Map Unit Name
124	Exeter loam, 0 to 2 percent slopes

The average annual precipitation in the south-central San Joaquin Valley receives an average of about 10 to 11.5 inches. The south-central San Joaquin Valley climate has hot, dry summers and cool, foggy, and rainy winters. The mean annual temperature is 60 to 63 degrees F, with an average annual winter temperature of 45 degrees and an average summer temperature of 80 degrees. The frost-free season averages 225 to 300 days (United States Department of Agriculture, 1980).

At an elevation of approximately 390 ft, the project is within the Lower Sonoran life zone. This zone generally ranges in elevation from sea level to 500 ft. According to Allan J. Schoenherr (1992, p. 463), the project was once in a Riparian Woodland. Often known as gallery forests, they bordered the large rivers that cut across the valley—particularly the San Joaquin and Sacramento Rivers and their tributaries. Riparian Woodlands reached their greatest development on the natural stream terraces or levees that rose from 3 to 20 ft. (1-6 m.) above the streambed. In some areas, the woodlands were 10 mi. (16 km.) wide. Historical accounts suggest that in the mid-1800s, there were about a million acres (400,000 ha.) of Riparian Woodlands in the Great Central Valley. Today's estimate of 102,000 acres (41,600 ha.) may be generous, and much of this Riparian Woodland has been seriously degraded. Only about 1%, or 10,000 acres (4,000 ha.) could be considered pristine.

Flora of the Lower Sonoran Life Zone, specifically where the project is located, consists of:

Valley oak_____(*Querus lobata)*
Blue oak_____(*Querus douglasii)*
Foothill Pine_____(*Pinus sabiriana)*
Alkali grassland_____(*Puccinellia)*
Fremont Cottonwood_____(*Populus fremontii)*
Willows_____(*Salix)*
White alder_____(*Alnus rhombifolia)*
Manzanita_____(*Arctostaphylos)*
California bay laurel_____(*Umbellularia californica)*
Mulefat_____(*Baccharis salicifolia)*
Western sycamore_____(*Platanus racemosa)*
California black oak_____(*Quercus kelloggii)*
Chamise_____ (*Adenostoma fasiculatum)*
California lilac_____(*Ceanthus)*
Toyon_____(*Heteromeles arbutifolid)*
California buckeye_____(*Aesculus californica)*
Poison oak_____(*Toxicodendron diversilobum)*
California poppy_____(*Eschcholzia californica)*
Blue dicks_____(*Dipterostemon capitatus)*
Narrowleaf milkweed_____(*Asclepias fasciscularis)*
Deergrass_____(*Muhlenbergia rigens)*

Fauna of the Project Area:

California Ground Squirrel_____(*Otospermophilus beecheyi)*
Black-tailed Jack Rabbit_(*Lepus californicus)*
Desert Cottontail_____(*Sylvilagus audubonii)*

Botta's Pocket Gopher__*(Thomomys bottae)*
Gray Fox_____*(Urocyon cinereargentues)*
Coyote _____*(Canis latrans)*
Bobcat_____*(Lynx rufus)*
Mountain Lion/Puma_____*(Puma Concolor)*
Red-tailed Hawk_____*(Buteo jamaicensis)*
Golden Eagle_____*(Aquila chrysaetos)*
Great Horned Owl_____*(Bubo virginianus)*
California Quail_____*(Callipepla californica)*
California Scrub-Jay_____*(Aphelocoma californica)*
Western Fence Lizard_____*(Sceloporus occidentalis)*
Gopher Snake_____*(Pituophis catenifer)*
Common Kingsnake_____*(Lampropeltis getulus)*
Western Rattlesnake_____*(Crotalus oreganus)*

3.2 Cultural Setting

Cultural resources include prehistoric-era archaeological sites, historic-era archaeological sites, Native American traditional cultural properties, sites of religious and cultural significance, and historical buildings, structures, objects, and sites. The importance of any single cultural resource is defined by the context in which it was first created, current public opinion, and modern yet evolving analysis. From the analytical perspective, temporal and geographic considerations help to define the historical context of the Project area. The importance or significance of a cultural resource is in part described by the context in which it originated or developed. National Park Service Bulletin 16a (1997) describes a historic context as "information about historic trends and properties grouped by an important theme in the prehistory or history of a community, state, or the nation during a particular period of time." A context links an existing property to important historic trends, and this allows a framework for determining the significance of a property. Given this, a major goal of the historian is to determine accurate themes of analysis, a task that can only be undertaken by a thorough review of previous researchers' thoughts and ideas, as well as reviewing the literature of the resources.

In California, historians have divided the past into broad categories based on climate models, archaeological dating and written histories. Paleontologists divide time into much larger segments, with defined and named periods of time shortening in timespan as the modern era is reached. For the purposes of this analysis, these periods in history have been summarized below.

3.2.1 Prehistoric Setting

During the Early Holocene epoch (9700 to 4000 B.C.), large game hunting societies populated the area. Culturally significant surface finds in the Tulare Basin have yielded some projectile points similar to particular Paleoindian varieties (i.e., Western Clovis), suggesting an initial occupation pre-dating approximately 11,300 years before present (B.P.). The Middle Holocene epoch (4000 to 1000 B.C.) is characterized by Pinto-like points and groundstone tools, although the association between the epoch and specific societies is not certain.

Olsen and Payen (1968) developed a chronology of four temporally distinct complexes for sites found within the southern San Joaquin Valley. The first complex, the Positas Complex, ranges from 3300 to 2600 B.C. and is characterized by small, shaped mortars, short cylindrical pestles, milling stones, perforated flat cobbles, and sea snail shell beads. The second complex is the Pacheco Complex, which ranges from approximately 2600 B.C. to 300 A.D. This complex is divided into Phase A and Phase B. Phase B ranges from 2600 B.C. to 1600 B.C. and is characterized by biface arrow points, abalone shell ornaments, and sea snail shell beads. Phase A ranges from 1600 B.C. to 300 A.D. and is represented by more variation in shell bead types, perforated canine teeth, bone awl, whistles, grass saws, large stemmed, and side-notched points, and an abundance of milling stones, mortars, and pestles.

The third complex, the Gonzaga Complex, ranges from 300 to 1000 A.D. and is characterized by extended burials, bowl mortars, shaped pestles, squared and tapered stem projectile points, bone awls, grass saws, and a shell industry composed of distinctive shell ornaments and beads.

Lastly, the Panoche Complex ranges from 1500 A.D. to European contact (mid to late 1700 A.D.) and is characterized by the presence of fewer milling stones, varied mortars and pestles, small side-notched arrow points, clamshell disc beads, bone awls, whistles, saws, and tubes.

3.2.2 Ethnographic Setting

The Project area is located within the traditional cultural territory of the Penutian-speaking Yokuts tribal groups, who occupied the southern San Joaquin Valley region and much of the nearby Sierra Nevada. Ethnographic information about the Yokuts was collected primarily by Powers (1971, 1976 [originally 1877]), Kroeber (1925), Gayton (1930, 1948), Driver (1937), Latta (1977), and Harrington (n.d.). For a variety of historical reasons, existing research information emphasizes the central Yokuts tribes who occupied both the valley and particularly the foothills of the Sierra. The northernmost tribes suffered from the influx of Euro-Americans during the Gold Rush, and their populations were in substantial decline by the time ethnographic studies began in the early twentieth century. In contrast, the southernmost tribes were partially removed by the Spanish to missions and eventually absorbed into multi-tribal communities on the Sebastian Indian Reservation (on Tejon Ranch), and later the Tule River Reservation and Santa Rosa Rancheria to the north. The result is an unfortunate scarcity of ethnographic detail on southern Valley tribes, especially in relation to the rich information collected from the central foothills tribes where native speakers of the Yokuts dialects are still found. Regardless, the general details of indigenous lifeways were similar across the broad expanse of Yokuts territory, particularly in terms of environmentally influenced subsistence and adaptation, and with regard to religion and belief, which were similar everywhere.

This scarcity of specific detail is particularly apparent in terms of the southern valley tribal group distribution. The San Joaquin Valley floor, and thus the study area, was occupied by these southern Valley Yokuts speakers, themselves divided into a series of autonomous "tribelets," the boundaries of which are not well defined. The Yauelmani Yokuts lived from the Kern River area, in modern Bakersfield, to the southeast corner of the valley, on the Tejon Ranch, thus likely including the study area. The Hometwali were centered around Kern Lake, while the Tulamni occupied the west side of Buena Vista Lake and the foothills of the Temblors, at least to McKittrick. The Tuhohi resided from the Kern River delta north to the Goose Lake area and west to the sloughs near Buttonwillow. Yokuts villages apparently extended up to, but not into, the mouths of the canyons on the northern and western fronts

of the Tehachapi Mountains, well into the foothills and lower elevations of the Sierra Nevada on the east, and to the crest of the Temblor Range on the west. The Yokuts are Penutian speakers and are linguistically related to northern occupants of the San Joaquin Valley.

The Yokuts settlement pattern was largely consistent, regardless of the specific tribe involved. Winter villages were typically located along lakeshores and major stream courses (as these existed circa AD 1800), with dispersal phase family camps located at elevated spots on the valley floor and near gathering areas in the foothills.

Most Yokuts groups, again regardless of specific tribal affiliation, were organized as a recognized and distinct tribelet; a circumstance that almost certainly pertained to the tribal groups noted above. Tribelets were land-owning groups organized around a central village and linked by shared territory and descent from a common ancestor. The population of most tribelets ranged from about 150 to 500 people (Kroeber, 1925).

Each tribelet was headed by a chief who was assisted by a variety of assistants, the most important of whom was the winatum, a herald or messenger and assistant chief. A shaman also served as a religious officer. While shamans did not have any direct political authority, as Gayton (1930) has illustrated, they maintained substantial influence within their tribelet.

Shamanism is a religious system common to most Native American tribes. It involves a direct and personal relationship between the individual and the supernatural world, enacted by entering a trance or hallucinatory state (usually based on the ingestion of psychotropic plants, such as jimsonweed or, more typically, native tobacco). Shamans were considered individuals with an unusual degree of supernatural power, serving as healers or curers, diviners, and controllers of natural phenomena (such as rain or thunder). Shamans also produced the rock art of this region, depicting the visions they experienced in vision quests believed to represent their spirit helpers and events in the supernatural realm (Whitley, 1992, 2000).

The centrality of shamanism to the religious and spiritual life of the Yokuts was demonstrated by the role of shamans in the yearly ceremonial round. The ritual round is performed the same each year, starting in the spring with the jimsonweed ceremony, followed by the Rattlesnake Dance and (where appropriate) First Salmon Ceremony. After returning from seed camps, fall rituals began in the late summer with the mourning ceremony, followed by the first seed and acorn rites, and then the bear dance (Gayton, 1930:379). In each case, shamans served as ceremonial officials responsible for specific dances that featured displays of their supernatural powers (Kroeber, 1925).

Subsistence practices varied from tribelet to tribelet based on the environment of residence. Throughout Native California, and the Yokuts territory in general, the acorn was a primary dietary component, along with a variety of gathered seeds. Valley tribes augmented this resource with lacustrine and riverine foods, especially fish and wildfowl. As with many Native California tribes, the settlement and subsistence rounds included the winter aggregation into a few large villages, where stored resources (like acorns) served as staples, followed by dispersal into smaller camps, often occupied by extended families, where seasonally available resources would be gathered and consumed.

Although population estimates vary, and population size was greatly affected by the introduction of

Euro-American diseases and social disruption, the Yokuts were one of the largest, most successful groups in Native California. Cook (1978) estimates that the Yokuts region contained 27 percent of the Aboriginal population in the state at the time of contact; other estimates are even higher. Many Yokuts people continue to reside in the southern San Joaquin Valley today.

3.2.3 Historic Setting

In California, the historic era is divided into three general periods: the Spanish or Mission Period (1769 to 1821), the Mexican or Rancho Period (1821 to 1848), and the American Period (1848 to present). The mission system, which ultimately established 21 missions between 1796 and 1822, consisted of missions, presidios, and pueblos, and was designed to convert the indigenous peoples of California to Christianity and assimilate them under Spanish rule (Gudde, 1998).

The Spanish Period saw exploration and the establishment of the San Diego Presidio and missions at San Diego (1769) and San Luis Rey (1798), and asistencias (chapels) to the San Diego Mission at Santa Ysabel (1818) and to the San Luis Rey Mission at Pala (1816). Horses, cattle, agricultural foods, and weed seeds, and a new architectural style and method of building construction were also introduced. Spanish influence continued after 1821, when California became a part of Mexico, yet the missions continued to operate for a short time longer, and laws governing the distribution of land were retained.

In 1821, Mexico won independence and control of the Spanish American colonies from Spain. Land was allowed to be redistributed, and the native neophytes were freed from church jurisdiction as a result of the Secularization Act of 1833. During this secularization period, the Mexican authorities in Alta California made numerous large land grants on former mission properties in the area; many became private ranches, or ranchos; the vast majority were the result of land grants from the Mexican government (Robinson, 1979). The Mexican Period ended in 1848 as a result of the Mexican-American War.

The American period began when the Treaty of Guadalupe Hidalgo was signed between Mexico and the United States in 1848. As a result of the treaty, the former Mexican province of Alta California became part of the United States as the territory of California. Rapid population increase occasioned by the Gold Rush of 1849 allowed California to become a state in 1850. Most Mexican land grants were confirmed to the grantees by U.S. courts, but usually with more restricted boundaries, which were surveyed by the U.S. Surveyor General's office.

When California became a state, the government divided California into counties. One of the largest was named Mariposa County, covering the whole state. In 1852, Mariposa County underwent a division, resulting in the southern portion being designated as Tulare County. Later, Tulare County was again divided, creating Fresno, Kern, Kings, and Inyo counties. The first settlers to visit what is now the San Joaquin Valley came after 1800. The first settlement in Tulare County was where the old Indian trail crossed the Kaweah River, about ten miles east of Visalia. Emigrants skirted the eastern foothills in the vicinity of Orosi as early as 1826.

The county is named for Tulare Lake, once the largest freshwater lake west of the Great Lakes. Drained for agricultural development, the site is now in Kings County, which was created in 1893 from the western portion of the formerly larger Tulare County. The name Tulare is derived from the giant sedge

plant called tule (too-lee), *schoenoplectus acutus*, in the plant family *Cyperaceae,* native to freshwater marshes that once lined the shores of Tulare Lake. These native grasses are ecologically important as they help buffer against weather forces and help reduce erosion, along with allowing for the propagation of other plant species.

The discovery of gold in 1848 led to a significant influx of migrants to California, with wagons passing through Orosi from 1849 to 1852. While many wagon trains carrying gold seekers passed through the village, some travelers chose to stay and establish farms in the fertile land. In 1856, a store was opened to cater to the needs of miners and the indigenous tribes living along the rivers.

3.2.4 Local Setting

An early white settler to the region, who arrived in 1885, wrote of extensive grasslands and sagebrush. He described the plains as akin to setting off to sea. The Yokuts lived in many villages along the San Joaquin Valley and watching over this land for generations, traveling the waterways in tule boats, as well as hunting, fishing, and harvesting.

Looking back, it was white settlement that had obliterated over 96 percent of the Central Valley's original four million acres of wetland and destroyed over 90 percent of the riparian forests in less than 150 years. Fewer than four percent remain of the 800,000 acres of grassland scrub that many have originally gone from Fresno to Bakersfield. There were also the results of the white settlers on some extinct and near-extinct species in the San Joaquin Valley. Three of those are the San Joaquin Valley kit fox, the burrowing owl, and the Tipton kangaroo rat. Not only that, but in some places the surface of the land used to reach 30 ft. higher, but the land has sunk, where groundwater has been removed.

There was a lake so expansive in the region that it used to meet the horizon like the ocean. It was called Pa'ashi in the Yokut language, which means "big water." For the Yokuts, this water was a very important source for their existence. The Yokuts tribe that lived closest to the lake is the Tachis, who were also the largest group of the Yokuts group. Tulare Lake is another name for the waterway. The Yokuts used it to obtain food, shelter, and spiritual practices. In the late 1800s, the Yokuts' relationship with the lake ended; the lake was drained for agriculture, which soon destroyed and displaced the tribes. Something was happening recently, though, in 2023, there was so much heavy rainfall during a wet winter that it caused the lake to come back in a big way. This was a wonderful surprise to the contemporary Yokuts, who are now reconnecting with their ancestral lands. Tulare Lake's return has not been celebrated by the agricultural community, however. Many homes and businesses were flooded out, and these people are advocating for returning the land to agriculture (NPR Network, accessed December 1, 2025).

The topography of the San Joaquin Valley is created by the interaction between active tectonics and gradational processes. In the Coast Ranges, on the western edge of the Valley, there exists a fold and fault belt, while the valley floor is an asymmetric structural basin with a regional southward tilt. Tectonic subsidence rates have had less effect than sedimentation (Schoenherr, 1992).

Located between the Coast Ranges and the Sierra Nevada, the Project is in the southwestern section of the Valley. The San Joaquin Valley is actually one of two valleys that make up the Great Valley of California. The Northern Valley is called the Northern Sacramento Valley, and the other is the Southern Valley, the San Joaquin Valley. The Great Valley is an alluvial plain that spans about 50 miles wide and

400 miles long. The alluvial plain of the Central Valley is drained by the Sacramento and San Joaquin Rivers, which end up joined and flowing into the San Francisco Bay. Farther north, the floodplain of the Sacramento Valley is divided by the Sutter (Marysville) Buttes, which are volcanic plugs about 2,000 ft. high, isolated Plio-Pleistocene Buttes. As much as 20,000 to 40,000 ft. thick flat-lying sediments fill the valley floor. A broad, U-shaped cross-sectional profile (trough) that is steeper on the west than the east, from Cretaceous and Cenozoic strata. Along the western margin of this trough, adjacent to the Coast Ranges, the edges of the tilted layers of Great Valley sedimentary rock are visible.

Due to its mild climate and extensively fertile soils, the Great Valley has become one of the leading agricultural regions in the world. During periodic, large floods, rivers flowing from the Sierra Nevada replenish sediment, forming fertile floodplain deposits. The Great Valley was delayed in its development due to the floods and vast wetlands (Schoenherr, 1992).

4.0 ARCHIVAL RECORDS SEARCH

4.1 Southern San Joaquin Valley Information Center

The Project area is in the USGS *Orange Cove South, California* 7.5' Series Quadrangle (USGS, 2021). On November 17, 2025, Soar submitted a records search request to the Southern San Joaquin Valley Information Center located at the California State University, Bakersfield (Appendix A). The records search included a 0.5-mile buffer around the Project area. The results from the records search received on December 8, 2025, indicate that no cultural resource studies have been conducted within the Project area. According to the information on file, there are no recorded resources within the Project area.

There is one recorded resource within the 0.5-mile record search radius (Table 1). There were nine reports identified within a 0.5-mile radius of the Project area (Table 2).

Table 1. Resources within 0.5 Mile of the Project area

Primary No.	Type	Description
P-54-004004	Historic (HP15)	Orosi Branch Library; Orosi/Cutler Branch Library; OTIS Resource Number - 454743; OHP Property Number - 52437

Table 2. Survey Reports within 0.5 Mile of the Project area

Report No.	Year	Author(s) / Affiliation	Title
TU-00094	1981	Beatty, William C. Varner, Dudley M.	Archaeological Reconnaissance of Lot 52 of Tract 560, Tulare County, California
TU-00095	1980	Beck, Allen C.	Archaeological Field Reconnaissance Report Summary for the East Orosi Wastewater Facility
TU-00569	1988	Weinberger, Gay	Cultural Resource Assessment of Spartan Homes in Orosi

TU-00906	1994	Brady, Jon	Archaeological Reconnaissance of Lot 42 and Lot 43 in Block J of Orosi Colony, Orosi, California
TU-00992	1999	Varner, Dudley M.	A Cultural Resource Study for the Cutler Village Housing Project, in the Cutler/Orosi Market Area, Tulare County, California
TU-01017	2000	Hovey, Kevin Tackett, Will	Negative Archaeological Survey Report to Construct Asphalt Concrete Overlay and Shoulder Backing on State Route 63 from Route 201 to Avenue 460 in Tulare County, California
TU-01186	2003	Varner, Dudley M.	A Cultural Resource Study for the Self-help Enterprises Multi-Family Housing Project in Orosi, Tulare County, California
TU-01498	2010	Leach-Palm, Laura Brandy, Paul, King, Jay Mikkelson, Pat Seil, Libby Hartman, Lindsay And Brandeen, Jill	Cultural Resources Inventory of Caltrans District 6 Rural Conventional Highways in Fresno, Western Kern, Kings, Madera, and Tulare Counties.
TU-01901	2020		A Phase 1 Cultural Resource Survey for Self-Help Enterprises, Orosi Subdivision Project Orosi, Tulare County, California

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.

4.2 Sacred Lands File & Native American Contacts List Request

The California Native American Heritage Commission (NAHC) was contacted on November 17, 2025, to conduct a Sacred Lands File (SLF) search and to obtain a list of tribes culturally and geographically affiliated with the Project area (Appendix B). On November 19, 2025, the NAHC indicated there are no Native American traditional cultural places or sacred sites within or near the Project area. The NAHC provided a list of eight Tulare County Native American groups and individuals affiliated with five local tribes. On December 12, 2025, Soar Environmental Principal Archaeologist Heather Froshour, M.A., R.P.A., sent letters to five tribes describing the project's location and nature. In each letter, Ms. Froshour requested information on prehistoric, historic, and ethnographic land use, as well as on contemporary Native American values.

Soar Environmental did not receive comments from the Tulare County Native American groups or affiliated individuals regarding the proposed development at the project location.

4.3 HISTORIC AERIAL IMAGE REVIEW

Review of historic aerial imagery reveals no features throughout the history of aerial photography. It has been agricultural since the aerial photographs began being used in 1956, with no features visible on historic topo maps beginning in 1923 (Nationwide Environmental Title Research, LLC, 2020).

5.0 PREVIOUS DISTURBANCES IN THE PROJECT AREA

The surface and subsurface of the project area have been significantly disturbed by intense agricultural practices.

The past agricultural contamination affects the local aquifer used for drinking water, with residents' wells, some as shallow as 60 feet, running dry or becoming contaminated. New agricultural wells are being drilled to deeper levels, some to bedrock at around 280 feet down, to locate uncontaminated water or simply find water at all. The issue is prevalent throughout the water-bearing sediment layers (Tulare County, 2020).

The physical sinking of the land surface is another issue. It is a gradual process affecting the ground from the surface down to the compacting clay and silt layers in the aquifer systems. Historically, areas in the valley have sunk by as much as 30 feet in total, with current rates reaching several feet or more in recent decades in some areas. The disturbance involves the compression of the underground soil structure over vast areas and significant depths (Tulare County, 2020).

In summary, the following previous disturbances have occurred within or immediately adjacent to the Project area:

Surface Disturbance:

- **Agricultural Landscape**: The area is characterized by typical Central Valley soils like fine sandy loams and loam, suited for farming, but also alkali soils.
- **Infrastructure Challenges**: The community has struggled with failing drinking water and wastewater systems, requiring county intervention for management and funding.

Subsurface Disturbance:

- **Groundwater Contamination (nitrate)**: High nitrate levels from agricultural fertilizers exceed health standards, forcing residents to rely on bottled water.
- **Petroleum Contamination**: Past spills (gasoline, diesel) have been cleaned up, but required extensive monitoring of groundwater impacts.
- **Groundwater Overdraft and Subsidence**: Heavy groundwater pumping in the Central Valley causes aquifer depletion and land sinking (subsidence), a risk in the region.
- **Liquefaction Potential**: Geologic maps indicate the broader area has liquefaction potential, posing risks to the surrounding community, which has a poorly managed and failing sewer system, resulting in raw sewage leaks and maintenance backlogs, threatening access to safe drinking water supplies and causing other environmental harm. Tulare County is currently managing the system to address these problems.

6.0 FIELD SURVEY METHODS AND RESULTS

The basic criteria for determining the presence of prehistoric and historic cultural resources in local urban and rural settings generally include:

- Presence of flaking debris derived from stone tool manufacturing
- Presence of marine shell and/or other faunal remains
- Occurrence of material culture artifacts
- Surface expressions of cultural features
- Bedrock mortars and related milling features/components
- Soil discolorations or atypical soil manifestations
- Stone/adobe features associated with structural remains
- Diagnostic ceramics derived from Spanish, Mexican, or later periods
- Historic iron and glassware, cans, privy pits, and domestic occupational debris

This investigation included the following tasks:

- Review of regional history and previous cultural resource sites and studies within the Project area and the vicinity.
- Examination of archival topographic maps and aerial photographs for the Project area and the general vicinity.
- Request for a California Historical Resources Information System data request of the Project area and a 0.50-mile radius through the Southern San Joaquin Valley Information Center.
- Request of a NAHC Sacred Lands File Search for the Project area and a 0.50-mile radius. Contact with Tribal groups and individuals as named by the NAHC.
- Evaluate the potential for the proposed Project to result in significant impacts to resources, including the potential to impact buried cultural resources with no surface expression.
- Intensive Phase 1 pedestrian survey with transect intervals of 32 feet (10 meters) of the project area.
- Develop recommendations associated with impacts to cultural resources following the guidelines as outlined in the Regulatory Setting.

Soar Environmental Principal Archaeologist Heather Froshour, M.A., R.P.A., conducted the field survey of the Project area, and Julie Federico, M.A., R.P.A., Soar Environmental Archaeologist, assisted in the survey on December 10, 2025. The Project area was examined by systematic pedestrian inspection of the ground surface. Transect intervals varied from 32 feet (10 meters). Disturbances immediately adjacent to the Project area were also examined for primary and secondary surface archaeological indicators.

The approximately 2.45-acre Project area consists of a utility parcel (Figures 4-8). The surface visibility of the Project area, defined as the approximate percentage of native soils visible during the field survey of a given project component, was estimated at 5-10% within the Project area. The ground surface was covered with approximately ankle-high non-native grasses.

In summary, no *in situ* cultural resources or isolated materials potentially derived from primary or secondary archaeological contexts were observed on the surface of the Project area.

Figure 4. Overview from northeast corner of Project area, facing southwest



Figure 5. Overview from southeast corner of Project area, facing northwest



Figure 6. Overview from southwest corner of Project area, facing northeast



Figure 7. Overview from west edge of Project area, facing east



Figure 8. Overview from northwest corner of Project area, facing southeast



7.0 RECOMMENDED ACTIONS AND MITIGATION MEASURES

There appears to be a low possibility for subsurface cultural resources in the Project area, based on the results of the archival research and the fact that no known resource has been detected during previous disturbances within the Project area. There are no recorded cultural resources within the 0.5-mile buffer 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. No site testing or mitigation measures are recommended or required, unless previously undiscovered cultural resources are detected during construction.

No site testing or mitigation measures are recommended or required, unless previously undiscovered cultural resources are detected during construction.

A potential always exists to encounter previously undetected cultural resources. If cultural materials (prehistoric and/or historic artifacts) are detected during the course of ground disturbances associated with this project, all work in the immediate area of the find shall be halted until a qualified archaeologist can inventory and assess the significance of the find(s). At that point, the resources shall be evaluated in accordance with the procedures set forth in the California Environmental Quality Act (CEQA) 21083.2, sections 15064.5 and 15126.4, and the criteria regarding resource eligibility to the California Register of Historic Resources (CRHR).

If a resource cannot be avoided, then the resource must be examined vis-à-vis the provisions in the County Guidelines, and CEQA Sections 15064.5 and 15126.4, and the eligibility criteria as an "important" or "unique archaeological resource", as appropriate. In many cases, determining a resource's eligibility requires extensive research and archaeological testing.

Human remains are addressed by the State of California Health and Safety Code Section 7050.5. This code section states that no further disturbance shall occur until the County Coroner has made a determination of the origin and disposition of the remains, pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the human remains are determined to be prehistoric/ethnohistoric Native American remains, 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 24 hours of notification, and may potentially recommend scientific removal, reburial, nondestructive analysis of human remains, and/or specific treatment of associated burial goods.

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APPENDIX E

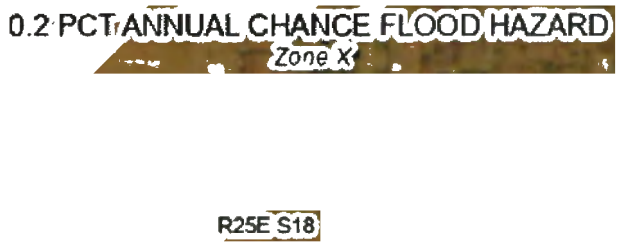
FLOOD HAZARD MAPS

WELL NO. 5A AUXILIARY POWER AND PUMPS PROJECT

OROSI PUBLIC UTILITY DISTRICT

National Flood Hazard Layer FIRMette

FEMA



0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Area of 1% annual chance flood with average depth less than one foot or with drainag areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represe an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 12/11/2025 at 10:31 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

NOTES TO USERS

nap is for use in administering the National Flood Insurance Program. It not necessarily identify all areas subject to flooding, particularly from local ge sources of small size. The community map repository should be ited for possible updated or additional flood hazard information.

ain more detailed information in areas where Base Flood Elevations) and/or floodways have been determined, users are encouraged to consult ood Profiles and Floodway Data and/or Summary of Stillwater Elevations contained within the Flood Insurance Study (FIS) report that accompanies IRM. Users should be aware that BFEs shown on the FIRM represent ed whole-foot elevations. These BFEs are intended for flood insurance purposes only and should not be used as the sole source of flood ion information. Accordingly, flood elevation data presented in the FIS should be utilized in conjunction with the FIRM for purposes of uction and/or floodplain management

tal Base Flood Elevations shown on this map apply only landward of rth American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should ware that coastal flood elevations are also provided in the Summary of ter Elevations tables in the Flood Insurance Study report for this jurisdiction. tions shown in the Summary of Stillwater Elevations tables should be used for uction and/or floodplain management purposes when they are higher than sections shown on this FIRM.

ties of the floodways were computed at cross sections and interpolated en cross sections. The floodways were based on hydraulic considerations gard to requirements of the National Flood Insurance Program. Floodway and other pertinent floodway data are provided in the Flood Insurance report for this jurisdiction.

n areas not in Special Flood Hazard Areas may be protected by flood ol structures. Refer to Section 2.4 "Flood Protection Measures" of the Insurance Study report for information on flood control structures for this iction.

rojection used in the preparation of this map was Universal Transverse tor (UTM) Zone 11. The horizontal datum was NAD 83, GRS80 spheroid. nces in datum, spheroid, projection or UTM zones used in the production of t for adjacent jurisdictions may result in slight positional differences in map s across jurisdiction boundaries. These differences do not affect the acy of this FIRM.

elevations on this map are referenced to the North American Vertical Datum 88. These flood elevations must be compared to structure and ground tions referenced to the same vertical datum. For information regarding rsion between the National Geodetic Vertical Datum of 1929 and the American Vertical Datum of 1988, visit the National Geodetic Survey te at http://www.ngs.noaa.gov or contact the National Geodetic Survey at lowing address:

nformation Services
, NNGS12
al Geodetic Survey
-3, #9202
Seas-West Highway
Spring, Maryland 20910-3282
713-3242

ain current elevation, description, and/or location information for bench s shown on this map, please contact the Information Services Branch National Geodetic Survey at (301) 713-3242, or visit its website at www.ngs.noaa.gov.

map information shown on this FIRM was derived from U.S. Geological y Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from graphy dated 1987 or later.

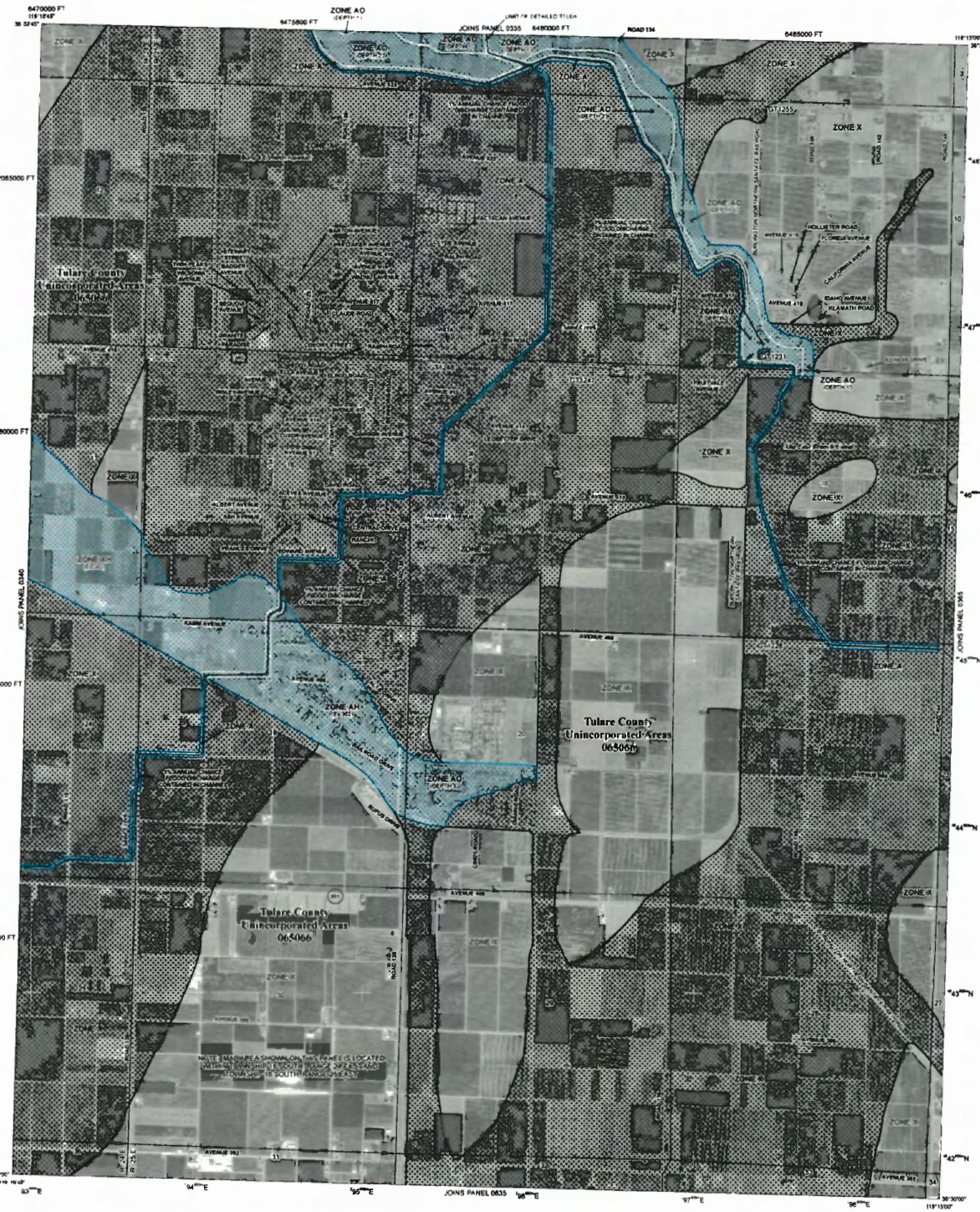
map reflects more detailed and up-to-date stream channel configurations hose shown on the previous FIRM for this jurisdiction. The floodplains and ays that were transferred from the previous FIRM may have been adjusted rform to these new stream channel configurations. As a result, the Flood e and Floodway Data tables in the Flood Insurance Study Report (which ne authoritative hydraulic data) may reflect stream channel distances that rom what is shown on this map.

orate limits shown on this map are based on the best data available at the f publication. Because changes due to annexations or de-annexations may occurred after this map was published, map users should contact appropriate unity officials to verify current corporate limit locations.

e refer to the separately printed Map Index for an overview map showing out of map panels; community map repository addresses; and a Listing of sdictions table containing National Flood Insurance Program dates for each unity as well as a listing of the panels on which each community is located.

ct the FEMA Map Service Center at 1-800-358-9616 for information on ble products associated with this FIRM. Available products may include ously issued Letters of Map Change, a Flood Insurance Study report, and/or versions of this map. The FEMA Map Service Center may also be reached at 1-800-358-9620 and its website at http://msc.fema.gov.

have questions about this map or questions concerning the National Flood nce Program in general, please call 1-877-FEMA MAP (1-877-336-2627) or e FEMA website at http://www.fema.gov.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDA BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has chance of being equaled or exceeded in any given year. The Special Flood Hazard Area area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard i Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-s elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); a depths determined. For areas of alluvial fan flooding, velocities determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual c flood by a flood control system that was subsequently decertified. Zo indicates that the former flood control system is being restored to p protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal protection system under construction; no Base Flood Ele determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kep of encroachment so that the 1% annual chance flood can be carried without substantial inc in flood heights.

OTHER FLOOD AREAS

ZONE X — Areas of 0.2% annual chance flood; areas of 1% annual chance flo average depths of less than 1 foot or with drainage areas les 1 square mile; and areas protected by levees from 1% annual chance

OTHER AREAS

ZONE X — Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D — Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zone boundary dividing Special Flood Hazard Areas of differen Flood Elevations, flood depths or flood velocities.
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL. 987) — Base Flood Elevation value where uniform within zone; el in feet*

* Referenced to the North American Vertical Datum of 1988

- (A)—(A) — Cross section line
- (23)—(23) — Transect line
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North Amer Datum of 1983 (NAD 83), Western Hemisphere
- 7°76"N — 1000-meter Universal Transverse Mercator grid values, zon 11
- 600000 FT — 5000-foot grid ticks: California State Plane coordinate system, zone IV (FIPSZONE 0404), Lambert Conformal Con projection
- DX5510 — Bench mark (see explanation in Notes to Users section of FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
June 16, 2009

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Communit Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insura agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET
150 0 300 600 METERS

PANEL 0346E

FIRM

FLOOD INSURANCE RATE

TULARE COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 345 OF 2550

(SEE MAP INDEX FOR FIRM PANEL LA

CONTAINS:

COMMUNITY — NUMBER — PANEL

MAP NUM
06107C0

EFFECTIVE D
JUNE 16,

Federal Emergency Management Ag