INITIAL STUDY CHECKLIST

1. **Project title:**	Southeast Service Area (Service Area 3) Lateral Pipeline Project
2. **Lead agency:**	Porterville Irrigation District 22086 Avenue 160 Porterville, CA 93257-4261
3. **Contact person:**	Dennis R. Keller Dennis R. Keller Consulting Civil Engineer, Inc. (559) 732-7938
4. **Project location:**	Unincorporated area west of Porterville (Figure 1, Appendix A) East of the Friant-Kern Canal, South of Olive Avenue and the Tule River in the vicinity of Highway 190 and Road 224 (Westwood Street) Sections 31, 32, T21S, R27E, and Sections 3, 4, 5, 6, T22S, R27E Mount Diablo Base and Meridian
5. **Latitude, Longitude:**	36°02'38.60" N, 119°04'15.25" W
6. **General plan designation:**	Agriculture
7. **Zoning:**	Exclusive Agricultural Zone – 20 Acre Minimum (AE-20)
8. **Description of project:**	The Porterville Irrigation District (District) provides water for agricultural irrigation purposes. The District utilizes imported surface water as their primary water supply. The District has a contract for Class 1 water from the Central Valley Project. The surface water is delivered via the Friant-Kern Canal. The District's primary purpose is serving irrigation water to the landowners within the District. The Proposed Project consists of installing new pipelines for irrigation water delivery purposes. The Proposed Project also includes the construction of one (1) new pump station and upgrading an existing pump station. The majority of the proposed Project features (pipelines, valves, and connections) will be located underground. The pump station elements will be installed at grade. The pipeline will be located in public rights-of-ways or recorded easements. The majority of the pipelines are located adjacent to agricultural lands. The pipelines will be constructed mostly along unpaved farm access roads, but will include some areas within existing road rights-

of-ways. Work will also be done along/adjacent to the Friant-Kern Canal. No modifications to the Friant-Kern Canal are required. Work will be completed downstream of the existing diversion/outlet structures. The total length of pipeline to be installed is about 28,600 linear feet. Pipe sizes will range from 8-inches to 42-inches in diameter. Figure 1 (Appendix A) shows the location of the pipelines. Construction activities include excavation, pipe installation, backfill, compaction and surface restoration.

9. Surrounding land uses and setting:

Rural area on valley floor along the east side of the Central Valley. The area surrounding the Proposed Project is extensively farmed, being principally planted to citrus. Surrounding land uses include agricultural and rural residential use.

10. Other public agencies whose approval is required

County of Tulare,
California Regional Water Quality Control Board; and
San Joaquin Valley Air Pollution Control District.
United States Bureau of Reclamation (Friant-Kern Canal)

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 — September 9, 2025
Signature — Date

Dennis R. Keller, Consulting Civil Engineer — Porterville Irrigation 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 area and its surroundings. The Proposed Project will occur within executed easements and in Tulare County road rights-of-ways. The majority of the Proposed Project features will be installed underground. Pump stations will be located adjacent to existing above ground structures.

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

c. **No Impact.** The Proposed Project consists of the installation of new underground pipelines. The new pump stations will be consistent with existing pump stations at same locations. Public views and existing visual character will not be affected.

d. **No Impact.** The Proposed Project would not create a new source of substantial light or glare. New underground facilities will resulting in no net change in lighting in the area of the Proposed Project. The Project does not include the installation of any lighting.

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 within public rights-of-ways, or executed easements and will not remove any land from agricultural production.

b. **No Impact.** The Proposed Project area is currently zoned Executive Agricultural – 20 acre minimum (AF-20) or public rights-of-way or executed easements.

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 and are estimated to be below any threshold. A summary of the emissions estimates is attached for reference. (Appendix B).

a. **No Impact.** The Proposed Project would not conflict with any applicable air quality plan. During construction, however, the District and the selected contractors 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 water pipelines, appurtenances and pump stations. 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 Report was completed in September, 2025, that included a field survey completed in June, 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 Report 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 noted the Swainson's Hawk and tricolored blackbird in particular. 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. Preventive measures will be incorporated into construction documents to avoid potential impacts.

   The Report also established that one (1) special status plant species (Sanford's Arrowhead) occurs within the Project area at the diversion channel. The Report determined that the magnitude of potential impacts could be reduced to a less than significant level through the incorporation of the following mitigation practices: preconstruction surveys and avoidance, and population salvage and compensory mitigation. The preventative measures will be incorporated into the construction documents to avoid potential impacts.

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

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

d. **No Impact.** The biological field survey established that the waterways of the Project Area may "support some terrestrial wildlife"; however, "none are likely to function as regionally important wildlife movement corridors." The Proposed Project does not result in features that impedes movement of common native wildlife.

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) 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 August, 2025 that included field surveys, record surveys and tribal contacts. A field survey was conducted on July 3, 2025. No cultural resources were identified within the surveyed area that warranted consideration for 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 Survey report did not identify the presence of a historical resource within the Proposed Project area. The Proposed Project area consists of actively maintained roadways and agricultural land areas.

b. **No Impact.** The Proposed Project area consists of actively maintained roadways, farm access roads and agricultural land areas. 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 actively maintained roadways, farm access roads and agricultural land areas. 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 new pipelines and associated pumping structures and water turnouts to provide water for agricultural 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 locations are 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 roadways or graded areas and shoulders. The Proposed Project area will be restored to existing conditions following pipeline installation. 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 primarily of Exeter Loam and Nord Fine Sandy Loam, with small areas of Tagus Loam and Tujunga Loamy Sands. The soil summary does not list any geologic hazards such as soil instability or subsidence. See response to Item (a).

d. **No Impact.** The Proposed Project does not include the construction of permanent dwelling buildings.

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.** Project operation does not require the use, transport or disposal of hazardous materials. Construction of the Proposed Project will require the use of fuel and associated materials equipment operation (lubricants). The quantities will 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. Equipment operation associated with construction will require lubricants. The quantities of such chemicals will not represent a significant hazard.

c. **No Impact.** The Proposed Project is not located within one-quarter mile of an existing or proposed school.

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 area is not located within an airport land use plan. The nearest public airstrip (Porterville) is approximately 700 feet away from the southern-most pipeline. The Project elements in this area will be buried pipeline and will not result in a safety hazard related to the airport.

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 new water pipelines, appurtenances, water services and two (2) pump stations. 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 agricultural water system uses surface water and will not result in community growth that would increase groundwater use. The Proposed Project does not include any groundwater extraction facilities. The Proposed Project installs new water pipelines, pumps and services.

c(i). **No Impact.** 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 paved land areas. The Proposed Project includes surface restoration requirements. The amount of impervious area will not increase and 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 majority of the Proposed Project not located in areas subject to flooding. A small part of the northern half of the Proposed Project is located in Zone X – Area of Minimal Flood Hazard. Proposed Project elements consist of buried water pipelines and related appurtenances that will not impede or redirect surface flows. Above-ground features such as pumps 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. **No Impact.** The Proposed Project consists of water pipelines, pump stations, related appurtenances and services which do not require chemicals that pose a risk of pollution during a flood event. The majority of the Proposed Project not located in areas subject to flooding. A small part of the northern half of the Proposed Project is located in Zone X – Area of Minimal Flood Hazard.

The Proposed Project site is located approximately 110 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 does not encompass any established community.

b. **No Impact.** There are no conflicts between the Proposed Project and the Tulare County General Plan. The Proposed Project improvements will occur with existing public rights-of-way and on District acquired easements.

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 primarily located within existing public road rights-of-ways and undeveloped agricultural land and will not result in a loss of mineral resources.

b. **No Impact.** The Proposed Project is primarily located within public road rights-of-ways and undeveloped agricultural land 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 agricultural nature of the Proposed Project area, any noise created by construction would be consistent with agricultural equipment 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 agricultural equipment 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, however is approximately 700 feet south of a portion of the Proposed Project. The Porterville Airport is not subject to regular flight activity as it is used primarily for recreational aircraft and emergency firefighting aircraft.

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 purpose of the Proposed Project is to install agricultural water pipelines to provide surface water delivery to the area.

b. **No Impact.** The Proposed Project is primarily located within public road rights-of-ways and on agricultural land. Proposed pipeline alignments accommodate existing rural 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 Proposed Project will not require, nor facilitate the need for, additional governmental services. No changes to service ratios, service times or other public service performance objectives will occur. Construction sequencing of the improvements will 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.** See response to Item XIII(a) – Population and Housing.

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 elements are located underground with the exception of valve boxes which are to be installed at finish grade elevations. Pump stations will be installed adjacent to existing structures in areas set aside for the specified purpose. All construction activities will be performed within County rights-of-ways or executed easements. A County encroachment permit will establish requirements to maintain traffic flow on streets at locations of pipeline installations.

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 elements are located underground, with the exception of valve boxes which are to be installed at finish grade elevations. Pump stations will be installed adjacent to existing structures in areas set aside for specified purpose.

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. **Less than Significant Impact.** The Proposed Project consists of installing new agricultural water distribution pipelines within existing roadway rights-of-ways that are maintained for traffic and residential access purposes in order to minimize the disturbance to undeveloped agricultural lands. The Proposed Project will not change the conditions of the Project area.

b. **No Impact.** The elements of the Proposed Project install new agricultural water distribution pipelines and appurtenances that will use existing agricultural water supplies. The Proposed Project does not require new water supplies.

c. **No Impact.** The Proposed Project addresses agricultural water delivery capabilities. 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. The Project Area does include Local Responsibility Areas within the southern portion of the Project 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 infrastructure along existing roads and access areas. 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.

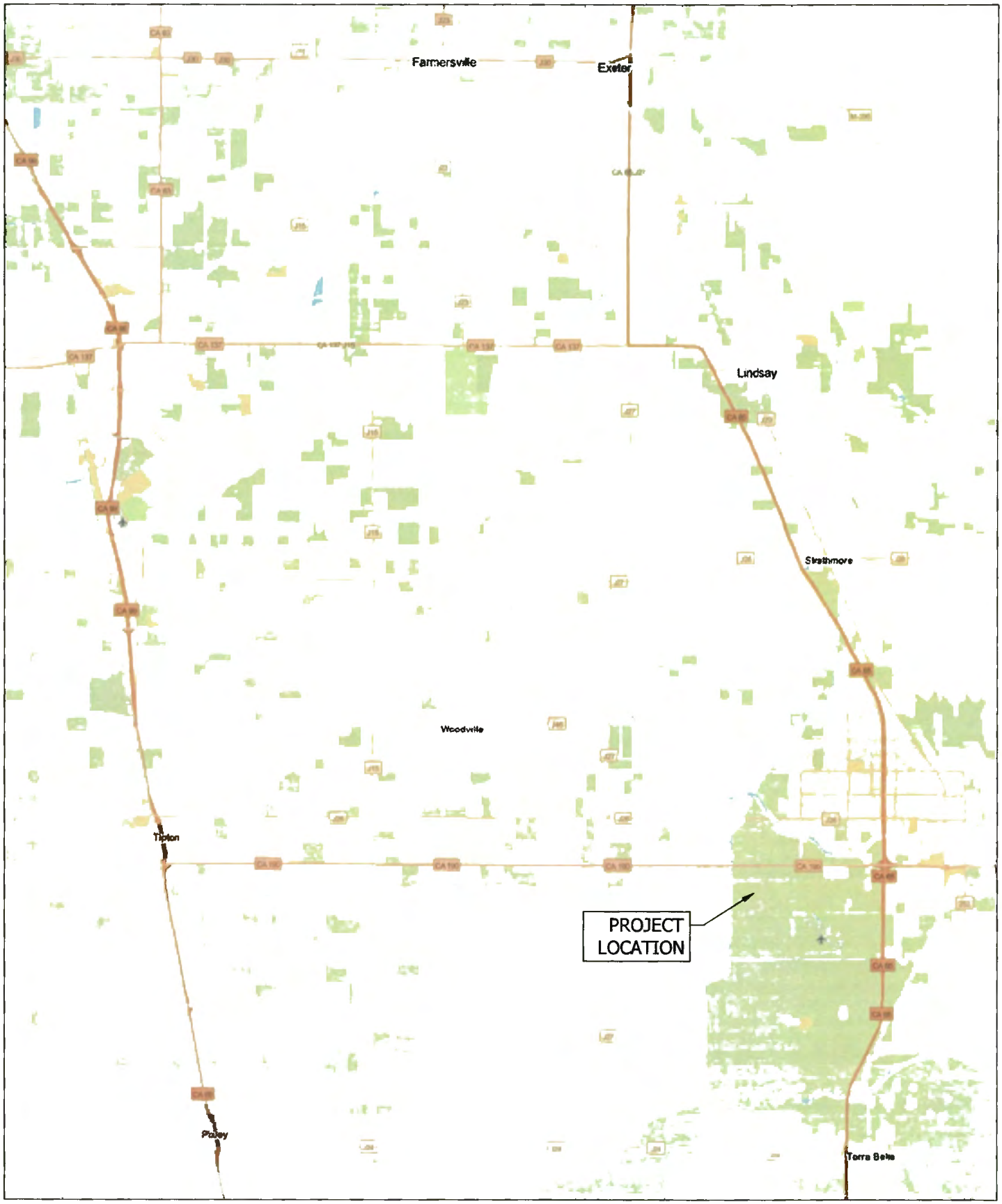
c. **No Impact.** No direct or indirect adverse effects on the human population have been identified through the completion of this Initial Study.

APPENDIX A

PROPOSED PROJECT LOCATION MAPS

SOUTHEAST SERVICE AREA (SERVICE AREA 3)
LATERAL PIPELINE PROJECT

PORTERVILLE IRRIGATION DISTRICT



SCALE: 1" = 15,000'

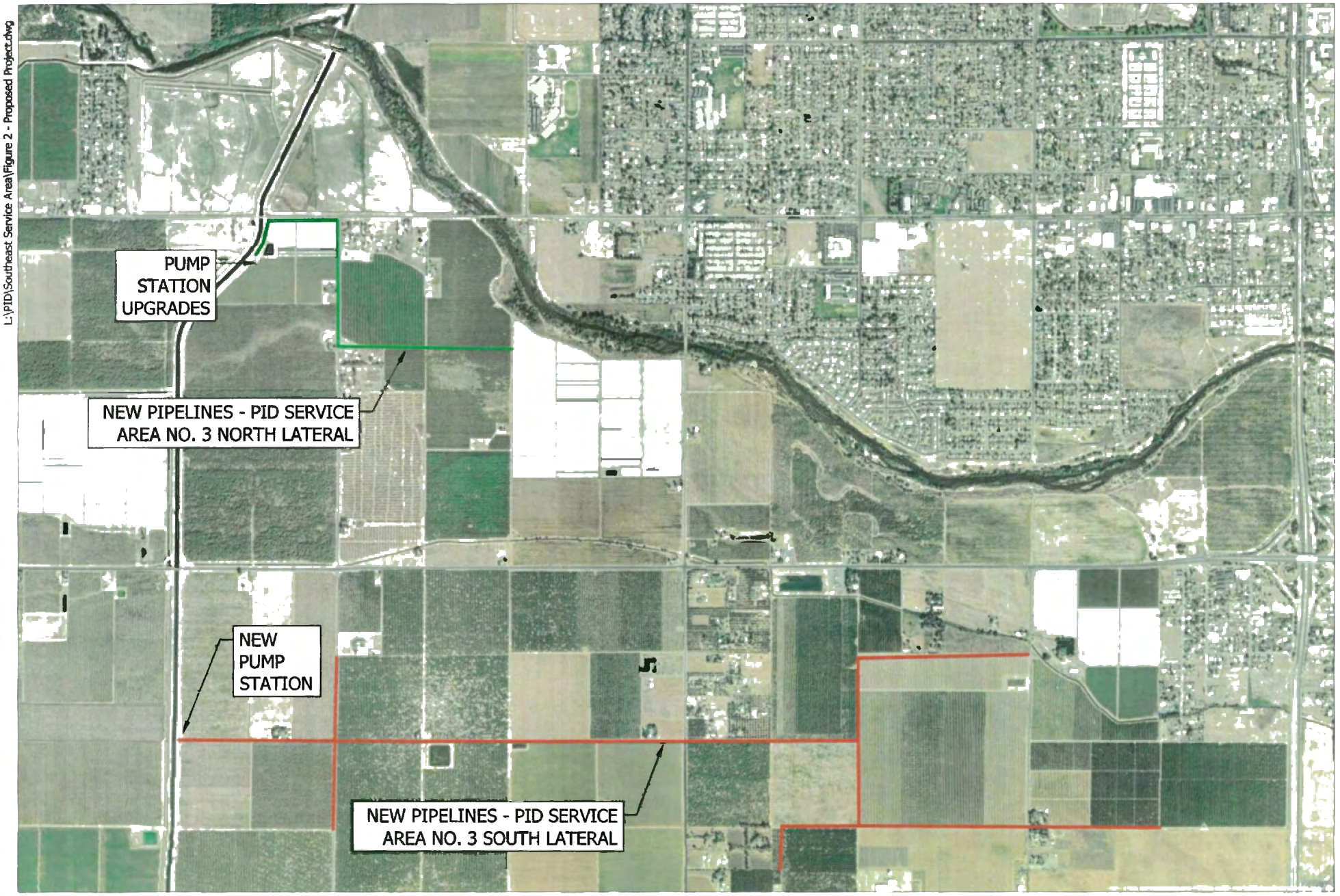
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PROJECT LOCATION
SOUTHEAST SERVICE AREA
(SERVICE AREA 3)
LATERAL PIPELINE PROJECT
PORTERVILLE IRRIGATION DISTRICT

DRK, CCE, INC.

L:\PID\Southeast Service Area\Figure 1 - Proposed Project.dwg

L:\PID\Southeast Service Area\Figure 2 - Proposed Project.dwg



N

0 1 2000 4000 Feet

1:24000

PROPOSED PROJECT
SOUTHEAST SERVICE AREA
(SERVICE AREA 3)
LATERAL PIPELINE PROJECT
PORTERVILLE IRRIGATION DISTRICT

APPENDIX B

AIR EMISSIONS/GREENHOUSE GASES ESTIMATES

SOUTHEAST SERVICE AREA (SERVICE AREA 3)
LATERAL PIPELINE PROJECT

PORTERVILLE IRRIGATION DISTRICT

ESTIMATED EMISSIONS
SOUTHEAST SERVICE AREA (SERVICE AREA 3) LATERAL PIPELINE PROJECT
PORTERVILLE IRRIGATION 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 28,600 linear feet of 8-inch through 42-inch diameter water pipelines, valves, connections and pump station construction and upgrades over a 311-day 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	2.5	1.2
Ozone (O_3)	Nonattainment	Extreme	10 (EPA De Minimis)	Unknown (Note 3)	Unknown (Note 3)
Oxides of Nitrogen (NO_x)	Unknown	-	10	1.7	0.9
Particulate Matter (PM_{10})	Attainment	NA	15	0.13	0.5
Reactive Organic Gases (ROG)	Unknown	-	10	0.21	0.4
Sulfur Dioxide (SO_2)	Attainment	NA	100 (EPA De Minimis)	0.005	0.0007
Volatile Organic Compounds (VOC)	Unknown	-	50 (EPA De Minimis)	Unknown (Note 3)	Unknown (Note 3)
Particulate Matter ($PM_{2.5}$)	Nonattainment	Serious	15	0.08	0.15
CO2e (Greenhouse Effect)	Does not apply	-	10,000 Metric Tons (California Air Resources Board)	404	803
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 water pipelines, manually operated gate valves and pump station operations.
3. Not calculated by CalEEMod.

APPENDIX C

BIOLOGICAL RESOURCES REPORT

SOUTHEAST SERVICE AREA (SERVICE AREA 3)
LATERAL PIPELINE PROJECT

PORTERVILLE IRRIGATION DISTRICT

LIVE OAK
ASSOCIATES, INC.

PORTERVILLE IRRIGATION DISTRICT SERVICE AREA 3 PIPELINES PROJECT
BIOLOGICAL EVALUATION
PORTERVILLE, CALIFORNIA

Prepared by

LIVE OAK ASSOCIATES, INC.

Natalie Neff, Staff Ecologist
Austin Pearson, Vice President

Prepared for
Ed Glass
Dennis R. Keller, Consulting Civil Engineer, Inc.
209 S. Locust St.
Visalia, CA 93291

September 11, 2025 PN 2973-01

OAKHURST
P.O. Box 2697 | 39930 Sierra Way #B
Oakhurst, CA 93644
P: (559) 642-4880 | F: (559) 642-4883

SAN JOSE
6840 Via Del Oro, Suite 220
San Jose, CA 95119
(408) 224-8300

SOUTH LAKE TAHOE
P.O. Box 7314
South Lake Tahoe, CA 96158
(408) 281-5885

WWW.LOAINC.COM



EXECUTIVE SUMMARY

Live Oak Associates, Inc. (LOA) conducted an investigation of the biological resources of lands that may be affected by the Porterville Irrigation District's proposed Service Area 3 Pipelines Project ("project"), evaluated impacts to those resources pursuant to the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA), and made preliminary effect determinations for federally listed species pursuant to Section 7 of the federal Endangered Species Act. The project is the installation of approximately 28,600 linear feet of new water pipelines, and pump station improvements at two existing turnouts along the Friant-Kern Canal. The project is located generally southwest of the limits of the City of Porterville in Tulare County, California.

An approximately 200-acre study area was defined for the project by LOA. It consists entirely of lands modified or disturbed by human use including paved and dirt roadways, agricultural lands, fallow fields, residences, canals, and other constructed waterways. The study area is expected to support primarily common and/or disturbance-tolerant plant and animal species; however, one special status plant species known from the vicinity was discovered on site and two special status animals known from the vicinity have some potential to occur on site and be significantly impacted by project development. The plant species in question is the Sanford's arrowhead and the animal species are the tricolored blackbird and Swainson's hawk. Project-related impacts are also considered potentially significant for nesting birds and raptors. Impacts to Sanford's arrowhead will be reduced by either avoiding plants or salvaging individuals if avoidance is not feasible. Impacts to the tricolored blackbird, Swainson's hawk, and other nesting birds and raptors will be reduced by either constructing the project outside of the nesting season or, if construction must occur during the nesting season, by conducting preconstruction surveys and avoiding active nests.

Impacts would be less than significant for 20 special status plant species and 17 special status animal species that are either not expected to occur in the study area or, in the case of several of the animals, that may occur in the study area but would not be at risk of construction-related injury or mortality. Potential project impacts to jurisdictional waters and wildlife movement corridors are also considered less than significant under CEQA and NEPA. The project would not affect sensitive habitats or designated critical habitat because such resources are absent. The project appears to be in compliance with local policies and is presumably not subject to any Habitat Conservation Plans or Natural Community Conservation Plans.

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1.0 INTRODUCTION

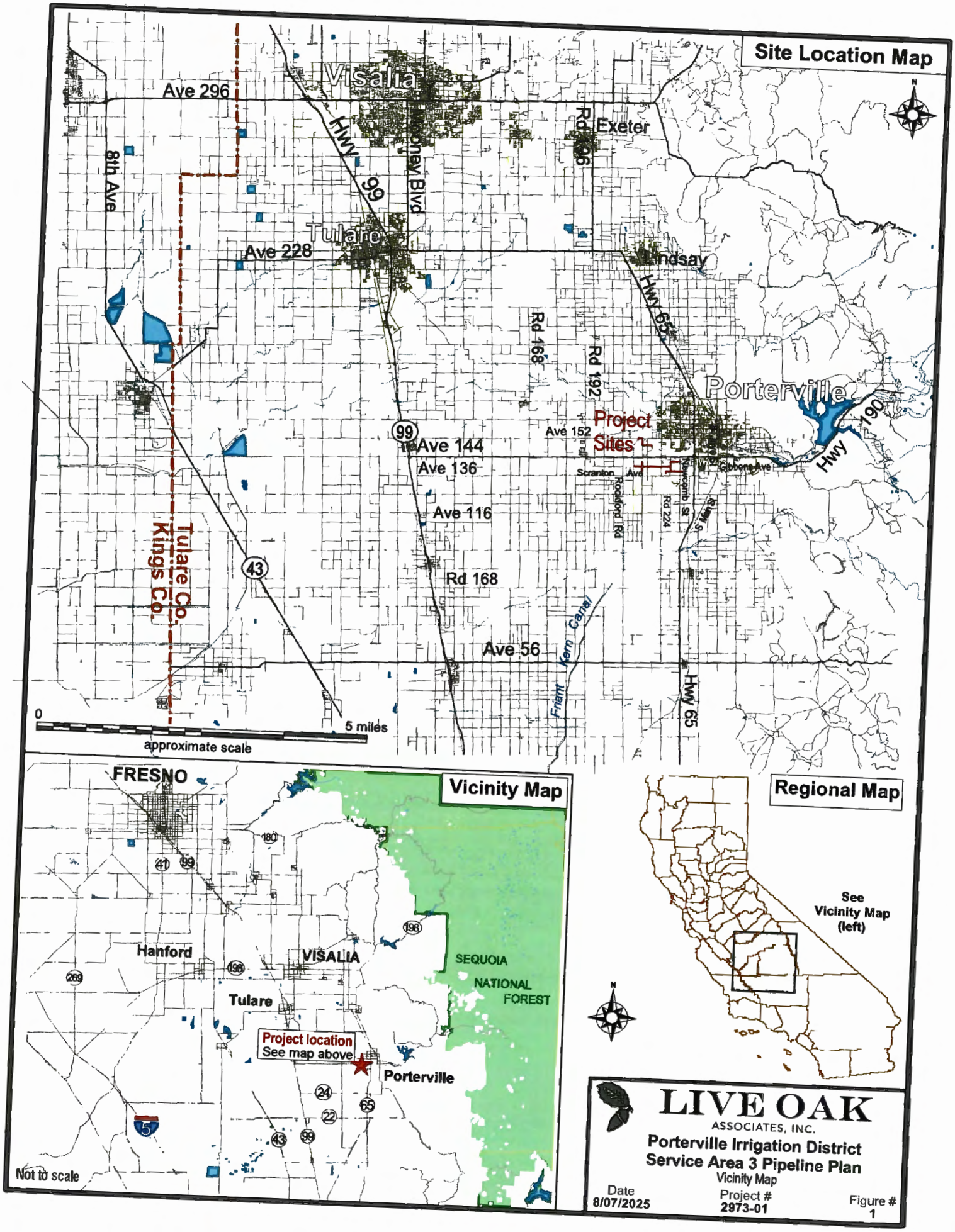
This technical report, prepared by Live Oak Associates, Inc. (LOA) to facilitate compliance with the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), and Section 7 of the federal Endangered Species Act, describes the biotic resources of lands that may be affected by the Porterville Irrigation District (PID) Service Area 3 Pipelines Project ("project"), and evaluates potential impacts to those resources that could result from the project. The project footprint will encompass approximately 30 acres of primarily agricultural and other human-modified lands. For the purposes of LOA's study, a larger, approximately 200-acre study area has been defined, intended to address a degree of uncertainty in the specific location and configuration of the project footprint.

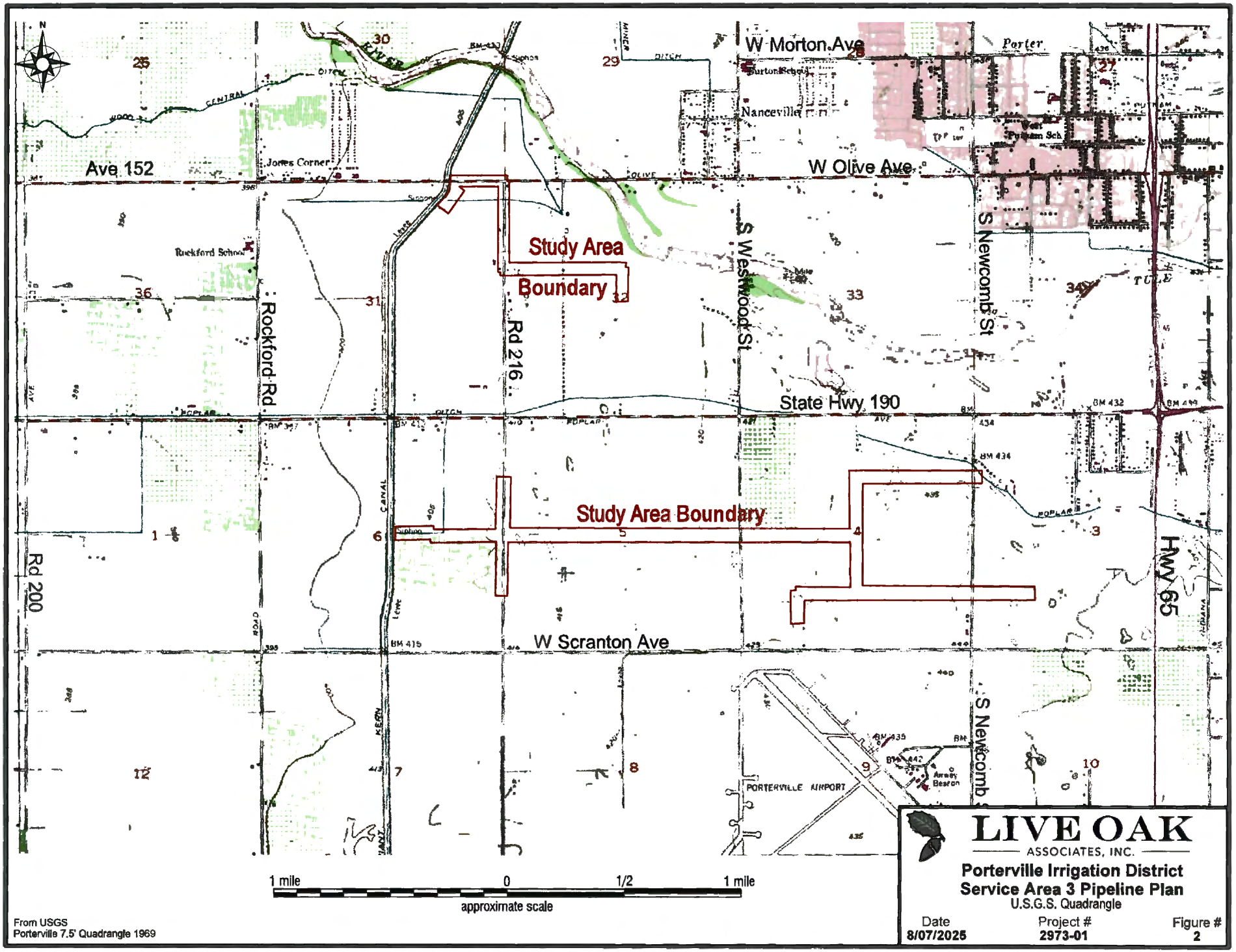
The study area is located near Porterville, south of the Tule River and east of the Friant-Kern Canal in Tulare County, California. (Figure 1). It may be found on the *Porterville* U.S. Geological Survey (USGS) 7.5-minute quadrangle in Sections 30, 31, and 32 in Township 21 South and in Sections 3, 4, 5, and 6 Township 22 South, Range 27 East, Mount Diablo Base and Meridian (Figure 2).

1.1 PROJECT DESCRIPTION

The proposed project is the installation of approximately 28,600 linear feet of pipeline ranging from 8 to 36 inches in diameter within PID Service Area No. 3. The pipeline will be installed with traditional trenching methods, in most cases within existing roads or the adjoining right-of-way. The disturbance corridor for pipeline installation will have a width of up to 45 feet.

The project also includes construction of a new pump station at an existing PID turnout and delivery channel along the Friant-Kern Canal near Olive Avenue and the expansion of an existing pump station at a PID turnout along the Friant-Kern Canal south of State Route (SR) 190. Disturbance associated with each pump station will be confined to an area of approximately 40 feet x 40 feet. No modification to the Friant-Kern Canal is required for the pump stations and no work will be conducted in the canal prism.


Site Location Map
Visalia
Ave 296
Hwy 99
Mooney Blvd
Rd 196
Exeter
8th Ave
Tulare
Ave 228
Lindsay
Hwy 65
Rd 168
Rd 192
Porterville
Project Sites
Ave 152
Ave 144
Ave 136
Ave 116
Rd 168
Ave 56
Hwy 190
Scranton Ave
Newcomb St
Gibbons Ave
Rd 224
Rockford Rd
Friant Kern Canal
Tulare Co.
Kings Co.
0
5 miles
approximate scale
Vicinity Map
FRESNO
Hanford
VISALIA
Tulare
SEQUOIA
NATIONAL
FOREST
Project location
See map above
Porterville
Not to scale
Regional Map
See
Vicinity Map
(left)
LIVE OAK
ASSOCIATES, INC.
Porterville Irrigation District
Service Area 3 Pipeline Plan
Vicinity Map
Date
8/07/2025
Project #
2973-01
Figure #
1



From USGS
Porterville 7.5' Quadrangle 1969

LIVE OAK
ASSOCIATES, INC.

Porterville Irrigation District
Service Area 3 Pipeline Plan
U.S.G.S. Quadrangle

Date	Project #	Figure #
8/07/2025	2973-01	2

1.2 REPORT OBJECTIVES

This report summarizes a biological study conducted by LOA to facilitate environmental review pursuant to CEQA and NEPA, and to facilitate compliance with Section 7 of the federal Endangered Species Act. As such, the report's objectives are to:

- Characterize the study area's existing biological resources, including biotic habitats, flora and fauna, soils, and aquatic resources.
- Evaluate the study area's potential to support sensitive resources such as special status species, sensitive natural communities, and jurisdictional waters and wetlands.
- Summarize all state and federal natural resource protection laws that may be relevant to project implementation.
- Identify and discuss potential project-related impacts to biological resources within the context of CEQA, NEPA, and other state and federal laws.
- Identify avoidance and mitigation measures that would reduce the magnitude of project-related impacts in a manner consistent with CEQA, NEPA, and species-specific guidelines.
- Make preliminary effect determinations pursuant to Section 7 of the federal Endangered Species Act for listed species with the potential to occur in the project vicinity.

1.3 STUDY METHODOLOGY

A reconnaissance-level field survey of the study area was conducted on June 30, 2025 by LOA biologist Natalie Neff. The survey consisted of a meandering walk and drive through the study area while identifying its principal land uses and the constituent plants and animals of each land use. LOA's field investigation did not include an aquatic resources delineation or focused surveys for special status species. The field survey was sufficient to generally describe those features of the study area that could be subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and/or the Regional Water Quality Control Board (RWQCB), and to assess the significance of possible biological impacts associated with project implementation.

LOA conducted an analysis of potential project impacts based on the known and potential biotic resources of the study area discussed in Section 2.0. Sources of information used in the



preparation of this analysis included: (1) results of the June 30, 2025 reconnaissance-level survey, (2) the *California Natural Diversity Data Base* (CDFW 2025), (3) the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2025), and (4) manuals, reports, and references related to plants and animals of the San Joaquin Valley region.

2.0 EXISTING CONDITIONS

2.1 REGIONAL SETTING

The study area is located in the eastern portion of the San Joaquin Valley. The San Joaquin Valley is a large, nearly flat alluvial plain bordered by the Sierra Nevada to the east, the Tehachapi Mountains to the south, the California coast ranges to the west, and the Sacramento-San Joaquin Delta to the north.

Like most of California, the San Joaquin Valley experiences a Mediterranean climate. Warm dry summers are followed by cool moist winters. Summer temperatures range from 56 to 101 degrees Fahrenheit, and the relative humidity is generally very low. Winter temperatures range from 37 to 72 degrees Fahrenheit. Annual precipitation in the vicinity of the study area is about 8.1 inches, almost 85% of which falls between the months of October and March. Nearly all precipitation falls in the form of rain (NOAA 2025).

The principal drainage of the project vicinity is the Tule River. The Tule River originates in the Sierra Nevada mountains east of the City of Porterville. It flows from east to west out of the mountains, through Lake Success, and into the San Joaquin Valley, passing within 600 feet of the study area at its closest point. It historically terminated at Tulare Lake, but now has its waters diverted for agriculture irrigation.

2.2 STUDY AREA

The linear study area encompasses potential work areas on either side of the proposed pipeline alignment and pump station improvement areas. The study area consists entirely of lands modified for anthropogenic use, including paved and dirt roads and drives, irrigation channels and basins, agricultural lands, ruderal lands, and residential lots. The topography of the study area is relatively flat with elevations ranging from 405 feet to 450 feet NGVD.

The study area contains nine soil mapping units (NRCS 2025). These soils are summarized in Table 1 below.

Table 1: Soils of the Study Area

Soil Mapping Unit	Parent Material	Drainage Class	Hydric Rating
114: Exeter loam, 0 to 2 percent slopes	Alluvium from granite rock sources	Moderately well drained	No
124: Exeter loam, 0 to 2 percent slopes	Alluvium from granitoid	Well drained	No
130: Nord fine sandy loam, 0 to 2 percent slopes	Alluvium derived from mixed	Well drained	No
137: Tagus loam, 0 to 2 percent slopes	Alluvium from granite rock sources	Well drained	No
138: Tujunga loamy sand, 0 to 2 percent slopes	Alluvium derived from granite	Somewhat excessively drained	No
143: Yettem sandy loam, 0 to 2 percent slopes	Alluvium derived from granite	Well drained	No
145: Water- perennial	-	-	-
155: San Joaquin loam, 0 to 9 percent slopes	Alluvium derived from acid igneous rock	Moderately well drained	No
176: Yettem sandy loam, 0 to 2 percent slopes	Alluvium from granitoid	Well drained	No

None of the study area's soil mapping units are considered hydric, meaning none have the propensity to pond water and support hydrophytic (water-loving) vegetation. Soils within the study area and surrounding lands have been subjected to decades of soil-disturbing activities associated with agricultural use, road and canal construction, and urban and rural development, and are not expected to exhibit their native soil characteristics or be particularly relevant to biological resource issues.

A list of vascular plants identified on the site is presented in Appendix A. A list of terrestrial vertebrates using or potentially using the study area is presented in Appendix B. Representative photos of the site are presented in Appendix C.

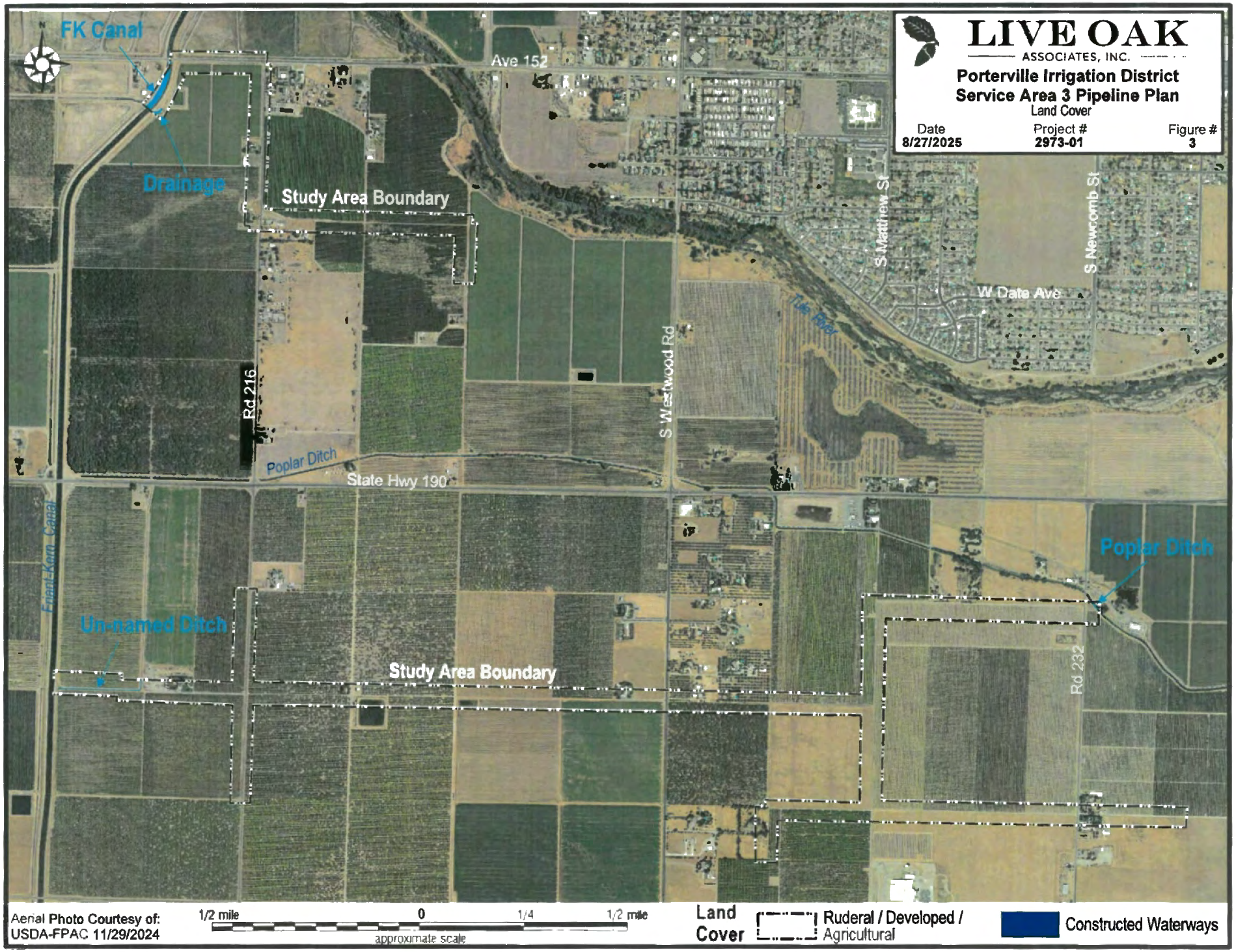
2.3 BIOTIC HABITATS / LAND USES

LOA identified two general land use categories within the study area: ruderal/developed/agricultural and constructed waterways (Figure 3). These land uses and their associated plant and animal communities are described in more detail in the following sections.

2.3.1 Ruderal/Developed/Agricultural

This land use category accounts for the vast majority of the study area, encompassing paved and unpaved roads, orchards, fallow fields, agricultural basins, other agricultural infrastructure, and several residences. While the roads were barren of vegetation, other lands within this category contained a variety of plant life at the time of LOA's survey. Almond (*Prunus dulcis*), pistachio (*Pistacia vera*), and orange (*Citrus* x *sinensis*) orchards were present along much of the pipeline route. Weedy grasses and forbs such as wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), wall barley (*Hordeum murinum*), bearded sprangletop (*Leptochloa fusca*), prickly lettuce (*Lactuca serriola*), field bindweed (*Convulvulus arvensis*), and Canada horseweed (*Erigeron canadensis*) were prominent throughout active agricultural lands and fallow fields of the study area. Plants within residential areas consisted of common ornamentals such as boxwoods (*Buxus spp.*), Mediterranean cypress (*Cupressus sempervirens*), oleander (*Nerium oleander*), and trees like eucalyptus (*Eucalyptus spp.*), California redwood (*Sequoia sempervirens*), mimosa tree (*Albizia julibrissin*), and false plum (*Prunus domestica*).

The study area contains three agricultural basins. The northwesternmost basin, located immediately east of the Friant-Kern Canal and approximately 400 feet south of Avenue 152, was lined with plastic weed-guard at the time of the survey and did not support any vegetation. The other two basins are located approximately 0.5 mile south of California State Route 190 and 0.75 mile east and 1.0 mile east of the Friant-Kern Canal. The basin 0.75 mile east of the Friant-Kern Canal was barren of vegetation. The smaller, easternmost basin functioned similarly to a pond;


FK Canal
Drainage
Study Area Boundary
Ave 152
Rd 216
Poplar Ditch
State Hwy 190
Friant-Kern Canal
Un-named Ditch
Study Area Boundary
S Westwood Rd
Tule River
S Mattriew St
S Newcomb St
W Date Ave
Poplar Ditch
Rd 232
LIVE OAK
ASSOCIATES, INC.
Porterville Irrigation District
Service Area 3 Pipeline Plan
Land Cover
Date
8/27/2025
Project #
2973-01
Figure #
3
Aerial Photo Courtesy of:
USDA-FPAC 11/29/2024
1/2 mile
0
1/4
1/2 mile
approximate scale
Land Cover
Ruderal / Developed / Agricultural
Constructed Waterways

its edges were lined with a variety of plant species including Canada horseweed, curly dock (*Rumex crispus*), umbrella sedge (*Cyperus eragrostis*), and annual bluegrass (*Poa annua*).

The study area's ruderal/developed/agricultural lands may be used by a variety of native wildlife species. Reptiles that could be found include the side-blotched lizard (*Uta stansburiana*), western fence lizard (*Sceloporus occidentalis*), common kingsnake (*Lampropeltis californiae*), and gopher snake. Common amphibians such as the Sierran treefrog (*Pseudacris sierra*) and western toad (*Anaxyrus boreas*) may breed in the agricultural basins and disperse through upland areas of this land use category.

A number of bird species could feasibly nest within the ruderal/developed/agricultural land use type. Ground nesters such as the western meadowlark (*Sturnella neglecta*), killdeer (*Charadrius vociferus*), and mourning dove (*Zenaida macroura*) could nest in the fallow fields and bare ground present within this land use. Homes, sheds, and other structures could provide nesting habitat for birds associated with the built environment such as house finch (*Haemorhous mexicanus*) and black phoebe (*Sayornis nigricans*). The many trees and bushes present provide habitat for a number of birds including American crow (*Corvus brachyrhnchos*), California scrub jay (*Aphelocoma californica*), and Brewer's blackbird (*Euphagus cyanocephalus*), among others. The large, mature trees present in this land use type could be utilized for nesting by raptors such as red-tailed hawk (*Buteo jamaicensis*) and Cooper's hawk (*Astur cooperii*). Foraging opportunities are plentiful and are likely to be used by many avian species including, but not limited to, those likely to nest on site.

Small mammal species likely to occur in the site's ruderal/developed/agricultural lands include the deer mouse (*Peromyscus maniculatus*), California ground squirrel (*Otospermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), California vole (*Microtus californicus*), and Audubon's cottontail (*Sylvilagus audubonii*). Raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*), and coyotes (*Canis latrans*) are likely to occur here from time to time as well. Various bat species such as Yuma myotis (*Myotis yumanensis*) or Mexican free-tailed bat (*Tadarida brasiliensis*) could roost in the structures and large trees of this land use type and forage on or over these lands.

2.3.2 Constructed Waterways

The study area contains short reaches of four constructed waterways: the Friant-Kern Canal, the Poplar Ditch, a PID delivery channel, and an unnamed ditch. The Friant-Kern Canal within the study area is an approximately 100-foot-wide, concrete-lined channel that is inundated for much of the year. Poplar Ditch within the study area has an earthen channel and carries seasonal flows; it was sparsely vegetated with weedy grasses and fully inundated at the time of LOA's survey. The PID delivery channel originates at the Friant-Kern Canal and presumably accepts flows from the canal during the irrigation season; at the time of LOA's survey, it was lined with weed barrier and drain rock. The unnamed ditch appears to pass below the Friant-Kern Canal via siphon, but presumably also accepts canal water via an existing PID turnout. This earthen ditch was vegetated with weedy grasses and fully inundated at the time of LOA's survey.

The aforementioned features are all highly maintained for their function in conveying irrigation water. At the time of LOA's survey, vegetation within these features was generally limited to their upper banks and included species such as bearded sprangletop, Johnson grass (*Sorghum halepense*), curly dock, tall flat sedge (*Cyperus eragrostis*) and prickly lettuce. By contrast, the PID delivery channel, with its weed barrier lining, had unvegetated banks, but its bed supported emergent wetland vegetation; most notably, a population of the Sanford's arrowhead (*Sagittaria sanfordii*), a special status species.

The constructed waterways may be used by a number of wildlife species as a water source; these could include any of the reptilian, avian, and mammalian species described for the ruderal/developed/agricultural land use type. The waterways offer a varying degree of value to amphibians like Sierran tree frog and western toad depending on the flow regime, lining substrate, and maintenance regimen.

The waterways also have the potential to be utilized by a variety of avian and bat species. A number of bat species and various bird species associated with built structures, such as the cliff swallow (*Petrochelidon pyrrhonota*) and black phoebe, may roost or nest under an on-site bridge over the Friant-Kern Canal. Wading birds such as the great blue heron (*Ardea herodias*) and great egret (*Ardea alba*) may forage from the banks of the waterways, and the black-necked stilt (*Himantopus mexicanus*) could construct mud nests along the earthen banks of Poplar Ditch or

the unnamed ditch. A large valley oak (*Quercus lobata*) on the east bank of Poplar Ditch provides roosting habitat for bats and nesting habitat for birds and raptors.

Fish such as largemouth bass (*Micropterus salmoides*) and bluegill (*Lepomis macrochirus*) are commonly found in the Friant-Kern Canal and Poplar Ditch. Other small fish such as mosquito fish (*Gambusia affinis*) and invertebrates such as crayfish (*Pacifastacus spp.*) are likely inhabitants of the constructed waterways as well. The PID delivery channel and unnamed ditch are unlikely to contain fish.

2.4 SPECIAL STATUS PLANTS AND ANIMALS

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 urban uses. As described more fully in Section 3.0, state and federal laws have provided 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) was queried for special status plant and animal occurrences in the nine USGS 7.5-minute quadrangles containing and surrounding the study area (*Cairns Corner, Lindsay, Frazier Valley, Woodville, Porterville, Success Dam, Sausalito School, Ducor,* and *Fountain Springs*). A number of special status plants and animals were returned in the query and are summarized below in Table 2. Sources of information for this table included *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1988-1990), *The Jepson Manual: Vascular Plants of California, second edition* (Baldwin et al 2012), the *California*



Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2025), *Calflora.org, iNaturalist.org*, and *eBird.org*.

TABLE 2. LIST OF SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT VICINITY

PLANTS

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

Species	Status	Habitat	Occurrence in the Study Area
California Jewel-flower (*Caulanthus californicus*)	FE, CE, CRPR 1B.1	Occurs in chenopod scrub, pinyon and juniper woodland, and sandy valley and foothill grassland; blooms February–May; elevation 250-3,300 ft.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development.
Springville Clarkia (*Clarkia springvillensis*)	FT, CE CRPR 1B.2	Endemic to central Tulare County, occurring primarily within the Tule River watershed. Grows on decomposing granite in blue oak woodland communities, typically between 1,220 and 3,000 feet in elevation. Blooms May-July.	**Absent.** The study area does not contain habitat suitable for this species and is below its elevational range.
Striped Adobe-Lily (*Fritillaria striata*)	CT, CRPR 1B	Occurs in heavy clay soils of cismontane woodland and valley and foothill grassland between 445 and 4775 feet in elevation. Blooms February-April.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development. Suitable soils are absent from the site.
San Joaquin Woolythreads (*Monolopia congdonii*)	FE CRPR 1B.2	Occurs in sandy grassland and chenopod scrub in sandy soils of the southwestern Central Valley between 200 and 2,625 feet in elevation. Blooms February-May.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development. The only known occurrence in the project vicinity is a CNDDB record from 1881, documented along Deer Creek. That population is considered to be possibly extirpated (CDFW 2025).
San Joaquin Adobe Sunburst (*Pseudobahia peirsonii*)	FT, CE, CRPR 1B.1	Occurs in foothill grasslands in heavy clay soils of the Porterville and Centerville series, between 300 and 2,625 ft. in elevation. Blooms March-April.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development. Suitable soils are absent from the site.
Keck's Checkerbloom (*Sidalcea keckii*)	FE, CRPR 1B.1	Occurs in grasslands and grassy openings in blue oak woodland on serpentine-derived clay soils. Blooms April- May; elevations 250- 2,130 feet.	**Absent.** The study area does not contain suitable habitat for this species. Suitable soils are absent from the site.

CNPS-listed Species

Earlimart Orache (*Atriplex cordulata* var. *erecticaulis*)	CRPR 1B.2	Occurs in valley and foothill grasslands between 130 and 330 ft. in elevation; blooms August-September.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development.
Lost Hills Crownscale (*Atriplex coronata* var. *vallicola*)	CRPR 1B.2	Found in chenopod scrub and valley and foothill grasslands; alkaline soils; blooms April-August; elevations below 2,080 ft.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development. Suitable soils are absent from the site.
Brittlescale (*Atriplex depressa*)	CRPR 1B.2	Occurs in alkaline vernal pools. Blooms June through September, elevation below 375 feet.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development.

TABLE 2. LIST OF SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT VICINITY

PLANTS

CNPS-listed Species

Species	Status	Habitat	Occurrence in the Study area
Lesser Saltscale (*Atriplex minuscula*)	CRPR 1B.1	Occurs in cismontane woodland and valley and foothill grasslands of the San Joaquin Valley; alkaline/sandy soils; blooms May-October; elevation 50-660 ft.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development. Suitable soils are absent from the site.
Vernal Pool Smallscale (*Atriplex persistens*)	CRPR 1B.2	Occurs in cismontane woodland and valley and foothill grasslands of the San Joaquin Valley; alkaline/sandy soils; blooms May-October; elevation 50-660 ft.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development. Suitable soils are absent from the site.
Subtle Orache (*Atriplex subtilis*)	CRPR 1B.2	Occurs in alkaline vernal pools; blooms July-Oct.; elevations below 400 ft.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development.
Recurved Larkspur (*Delphinium recurvatum*)	CRPR 1B.2	Occurs in poorly drained, fine, alkaline soils in grassland and Atriplex scrub; blooms March-June; elevations up to 2,500 feet.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development. Suitable soils are absent from the site.
Calico Monkeyflower (*Diplacus pictus*)	CRPR 1B.2	Occurs in bare ground around gooseberry or granite rock outcrops of broadleaved upland forest or cismontane woodland between 325 and 4,250 feet in elevation. Blooms March – May.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development.
Spiny-sepaled Button Celery (*Eryngium spinosepalum*)	CRPR 1B.2	Found in vernal pools, swales and valley and foothill grasslands at the eastern edge of the San Joaquin Valley and in the Tulare Basin; elevation between 330 and 840 ft. Blooms April to May.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development.
Alkali-Sink Goldfields (*Lasthenia chrysantha*)	CRPR 1B.1	Occurs in valley grassland, alkali sink, wetland riparian areas less than 328 ft. in elevation in the southern Sacramento Valley and San Joaquin Valley. Blooms February – June.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development.
Madera Leptosiphon (*Leptosiphon serrulatus*)	CRPR 1B.2	Found in chaparral and pine woodlands in the Sierra Nevada foothills ; elevations 980- 4,260 feet. Blooms April- May.	**Absent.** The study area does not contain habitat suitable for this species and is outside its elevational range.
Shining Navarretia (*Navarretia nigelliformis* ssp. *radians*)	CRPR 1B.2	Occurs in valley grassland, foothill woodland, freshwater-wetlands, and wetland-riparian between 525 and 1770 ft. in elevation. Blooms April-July.	**Absent.** The study area does not contain habitat suitable for this species and is outside its elevational range.
California Alkali Grass (*Puccinellia simplex*)	CRPR 1B.2	Occurs in alkali sinks and flats within grassland and chenopod scrub habitats of the Central Valley, San Francisco Bay area and western Mojave Desert; elevations below 3,000 feet. Blooms March-May.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development.

TABLE 2. LIST OF SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT VICINITY

PLANTS

CNPS-listed Species

Species	Status	Habitat	Occurrence in the Study area
Sanford's Arrowhead (*Sagittaria sanfordii*)	CRPR 1B.2	Occurs in freshwater emergent marsh habitat in drainage ditches and canals of California's Central Valley and low Sierra foothills. Blooms May to October.	**Present.** A population of Sanford's arrowhead was found within the on-site PID delivery channel, which originates at the Friant Kern Canal near Olive Avenue. At the time of LOA's survey, the population contained an estimated 50 individuals and appeared to be in good condition. This species also has some potential to occur in the study area's one vegetated agricultural basin and reaches of the Poplar Ditch and unnamed ditch. The study area's remaining aquatic features are not expected to support the Sanford's arrowhead due to lack of suitable growing substrate, rapid flow, maintenance regime, or some combination thereof.
Chaparral Ragwort (*Senecio aphanactis*)	CRPR 2B.2	Occurs in coastal scrub, foothill woodlands, alkali flats, and dry, open rocky areas. Blooms February- May; elevations up to 2,600 feet.	**Absent.** Any suitable habitat that may have once been present on the site has been eliminated through conversion to agricultural uses and development.

ANIMALS

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

Species	Status	Habitat	Occurrence in the Study Area
Crotch Bumblebee (*Bombus crotchii*)	CCE	Once common in the Central Valley, this species is now largely absent from this portion of its historic range (CDFW 2019). Where present, it is associated with open grassland and scrub habitats, where it relies on food plants of the *Asclepias, Chaenactis, Lupinus, Medicago, Phacelia,* and *Salvia* genera (Williams et al. 2014).	**Unlikely.** While there are a few recent iNaturalist records of this species in the project vicinity, located in the lower foothills approximately 4-5 miles east of the study area (iNaturalist 2025), the Crotch bumblebee is believed to be extirpated from much of its historical habitat throughout the valley floor and is unlikely to occur in the vicinity other than occasional transient movements. The agricultural and developed uses of the site provide generally unsuitable habitat for this species.
Valley Elderberry Longhorn Beetle (VELB) (*Desmocerus californicus dimorphus*)	FT	Lives in mature elderberry shrubs of California's Central Valley and Sierra foothills.	**Absent.** The current accepted range of this species no longer includes the San Joaquin Valley south of Merced County (CDFW 2025).

TABLE 2. LIST OF SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT VICINITY

ANIMALS

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

Species	Status	Habitat	Occurrence in the Study Area
Monarch Butterfly *(Danaus plexippus)*	FPT	Overwinters in coastal California and Baja California and breeds throughout California in the spring and summer along its annual migration north and east. The adult monarch lays its eggs on obligate milkweed (*Asclepias* spp.) host plants, which the resultant larvae feed on before pupating and emerging as adults. In addition to milkweed, this species requires abundant nectar resources to nourish migrating adults, and trees for roosting during migratory stopovers.	**Possible.** Monarchs do not appear to be common in the project vicinity. LOA is aware of only two documented sightings in the general area, recorded at the foot of Lake Success, some 7 miles east of the study area, in 2019 and 2024 (iNaturalist 2025). The study area consists of highly managed lands with generally low habitat value for the monarch. However, monarchs migrate through the region each spring and fall, and have some potential to forage for nectar in the study area or roost in the study area's trees during these movements. No milkweed was observed on site at a time of year when it should have been readily identifiable; therefore, monarchs are not expected to reproduce on site.
Vernal Pool Fairy Shrimp *(Branchinecta lynchi)*	FT	Found in vernal pools and swales, basalt flow depression pools, and depressions in sandstone rock outcrops; can occur in roadside ditches and puddles when in association with vernal pools.	**Unlikely.** There are two CNDDB occurrences of this species within 3 miles of the study, both recorded along SR 65 in 2002. The detections appeared to be the result of focused surveys in advance of SR 65 widening. The occurrences describe roadside vernal pools of fairly poor quality. The closest such pools were approximately 0.3 miles from the study area, in what then appeared to be ruderal grassland habitat. This property is now in agricultural cultivation and the Caltrans right-of-way is built out with a four-lane highway. Vernal pool fairy shrimp may yet persist in remnant vernal pools in the cultivated field; however, the study area is approximately 500 feet from any remnant vernal pools and the study area itself contains no suitable habitat for this species.

TABLE 2. LIST OF SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT VICINITY

ANIMALS

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Species	Status	Habitat	Occurrence in the Study Area
Western Spadefoot (*Spea hammondii*)	FPT, CSC	Occurs in grasslands of San Joaquin Valley, where it breeds in vernal pools or other seasonal wetlands and aestivates in underground refugia such as rodent burrows. Baumberger et al. (2019) recorded a maximum distance of around 860 feet between breeding and aestivation sites.	**Unlikely.** The study area is situated in an intensive agricultural landscape within which the western spadefoot is unlikely to have persisted. The site's aquatic features are all managed for water delivery/storage, with inundation regimes tied to the irrigation season rather than to the rainy months in which the western spadefoot breeds. Some of the features appear to be perennially inundated, but this is also not compatible with spadefoot reproduction as it allows for the proliferation of bullfrogs (*Lithobates catesbeianus*) and other predators. The closest CNDDB occurrence is historic in nature (1978), mapped approximately 7.5 miles southwest from the study area at its closest point (CDFW 2025). There are a number of iNaturalist occurrences in the general vicinity, all with obscured locations (iNaturalist 2025). The few occurrences with notes indicating their location are associated with the Herbert Wetland Prairie Preserve, located approximately 13 miles northwest of the study area at its closest point.
Northwestern Pond Turtle (*Actinemys marmorata*)	FPT, CSC	Found in ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires partially submerged rocks or logs for basking sites. Nesting takes place in open areas, on a variety of soil types, and up to ¼ mile away from water. Overwintering and summertime aestivation includes use of upland habitat, generally with leaf litter or other loose substrate for burying themselves.	**Unlikely.** Although the study area contains several aquatic features that offer some habitat value for the western pond turtle, all are situated in a matrix of intensive agricultural and developed lands generally not compatible with this species' ecology. There are no CNDDB or iNaturalist occurrences of this species within the vicinity of the study area (CDFW 2025, iNaturalist 2025).
Blunt-Nosed Leopard Lizard (*Gambelia sila*)	FE, CE, FP	Occurs in semiarid grasslands, alkali flats, and washes. Avoids densely vegetated areas. Inhabits the San Joaquin Valley and adjacent valleys and foothills north to southern Merced County.	**Absent.** The study area is situated in an intensive agricultural landscape within which the blunt-nosed leopard lizard would not have persisted. The only CNDDB occurrence of blunt-nosed leopard lizard is from 1974 and located approximately 11-miles southwest of the study area, and there are no iNaturalist occurrences within 10 miles of the study area (CDFW 2025, iNaturalist 2025).

TABLE 2. LIST OF SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT VICINITY

ANIMALS

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

Species	Status	Habitat	Occurrence in the Study Area
Swainson's Hawk *(Buteo swainsoni)*	CT	This breeding migrant to California nests in mature trees in riparian areas and oak savannah, and occasionally in lone trees at the margins of agricultural fields. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Likely.** This species is fairly well documented in the project vicinity. There are 7 recent eBird sightings within 3 miles of project boundaries; two are located along the Tule River approximately 0.25 and 0.5 mile from the study area (eBird 2025). A 2017 CNDDB record documented a Swainson's hawk with a fledging approximately 1.5 mile north of the northwesternmost portion of the study area along the Friant-Kern Canal. This species has the potential to forage in the study area's agricultural fields and fallow fields and nest in its mature trees.
California Condor *(Gymnogyps californianus)*	FE, CE. FP	Found in chaparral and valley and foothill grassland habitats; requires vast expanses of open natural land to meet its foraging needs. Nests in rock crevices, on overhung cliff ledges, and in old-growth conifers.	**Unlikely.** The study area lacks suitable condor nesting and roosting habitat and does not contain or adjoin large blocks of natural land that could support foraging by this species. At most, a condor could be seen flying over the study area but would otherwise not utilize it.
Tricolored Blackbird *(Agelaius tricolor)*	CT, CSC	Breeds colonially near fresh water in dense bulrush, cattails, or thickets of willows or shrubs, and increasingly in grain fields. Forages in grassland and cropland areas.	**Possible.** This species may forage in the study area's agricultural fields from time to time, and has the potential to nest in these fields when cultivated with crops suitable for nesting such as triticale or wheat. Tricolored blackbirds are occasionally sighted in the general vicinity along the Tule River (iNaturalist 2025).
Buena Vista Lake Ornate Shrew *(Sorex ornatus relictus)*	FE, CSC	Occurs in marshes and sloughs around the perimeter of Buena Vista Lake in Kern County; may also occur in the Tulare Basin and at Kern and Pixley National Wildlife Refuges.	**Absent.** The matrix of agricultural and developed lands that surround and make up the study area would not support or attract this species. There are no occurrences of this species within the vicinity of the study area.
Tipton Kangaroo Rat *(Dipodomys nitratoides nitratoides)*	FE, CE	Inhabits valley saltbrush scrub, valley sink scrub, and grassland habitats with friable, sandy-loam soils east of the California Aqueduct.	**Absent.** The study area consists entirely of agricultural and other highly modified lands that would not attract or support Tipton kangaroo rats. The only CNDDB record in the vicinity is historic in nature (1943), located approximately 7 miles northwest of the study area at its nearest point (CDFW 2025).

TABLE 2. LIST OF SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT VICINITY

ANIMALS

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

Species	Status	Habitat	Occurrence in the Study Area
San Joaquin Kit Fox (SJKF) (*Vulpes macrotis mutica*)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged ground squirrel burrows as denning habitat. May become adapted to urban environments, as has occurred in the cities of Bakersfield, Taft, and Coalinga.	**Unlikely.** The study area is characterized by intensive agriculture and other land uses generally incompatible with SJKF ecology. There are 20 historic CNDDB occurrences of SJKF within 10 miles of the study area, but all are 24 years or older, with most occurring in the early to mid-1970s (CDFW 2025). The closest modern documented sighting of SJKF is from June 2025 in an obscured location east of Richgrove, a minimum distance of 20 miles from the study area (iNaturalist 2025).

State Species of Special Concern

Species	Status	Habitat	Occurrence in the Study Area
Northern California Legless Lizard (*Anniella pulchra*)	CSC	Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Requires moist soils.	**Unlikely.** There are three occurrences of this species within 5 miles of the study area: a historical CNDDB occurrence (1940) mapped generally to Porterville, a 2017 CNDDB occurrence mapped approximately 4 miles east of the study area, and an iNaturalist occurrence documented in 2021 approximately 4.5 miles east of the study area. (CDFW 2025, iNaturalist 2025). Despite these nearby occurrences, the northern California legless lizard is unlikely to be found on the study area due to the lack of suitable habitat. Most of the study area has been significantly altered by agricultural practices and is unlikely to attract or support individuals of this species, even if they do occur in the vicinity.
Yellow-breasted Chat (*Icteria virens*)	CSC	Most often found in stream thickets and dense scrub near water, but occasionally found in pastures and upland thickets near woods. Breeds from as far north as southern Canada to as far south as central Mexico. Migrates to Mexico and Central America for the winter.	**Present.** At the time of LOA's survey, a yellow-breasted chat was spotted on a telephone wire near Poplar Ditch. The site lacks riparian thickets or other habitats likely to support breeding by individuals of this species, but chats may pass through or forage on site from time to time.

TABLE 2. LIST OF SPECIAL STATUS SPECIES POTENTIALLY OCCURRING IN THE PROJECT VICINITY

ANIMALS

State Species of Special Concern

Species	Status	Habitat	Occurrence in the Study Area
Pallid Bat (*Antrozous pallidus*)	CSC	Found in grasslands, chaparral, and woodlands, where it feeds on ground- and vegetation-dwelling arthropods, and occasionally takes insects in flight. Prefers to roost in rock crevices, but many also use tree cavities, caves, bridges, and buildings.	**Possible.** This species has some potential to roost in buildings, under bridges, or in trees within or adjacent to the study area. This species also has potential to forage over the site. A historical CNDDB occurrence from 1946 lies approximately 6 miles southeast of the study area (CDFW 2025).
Townsend's Big-eared Bat (*Corynorhinus townsendii*)	CSC	Found throughout California. Roosts most frequently in caves and cave-like structures, but has also been reported to utilize bridges, buildings, rock crevices, and hollow trees. Occurs in a variety of habitats.	**Possible.** This species has the potential to forage over the site and some potential to roost in buildings or trees within or adjacent to the study area. Two historical CNDDB occurrences (1941 and 1988) lie within 6 miles east of the study area (CDFW 2025).
Western Mastiff Bat (*Eumops perotis californicus*)	CSC	Frequents open, semi-arid to arid habitats, including conifer, and deciduous woodlands, coastal scrub, grasslands, palm oasis, chaparral and urban. Roosts in cliff faces, high buildings, and tunnels.	**Possible.** This species has some potential to forage over the site and could roost in snags of tall trees located on and near the study area. This species was mapped generally to Lake Success in 1994, which lies approximately 7.25 miles east of the study area at its closest point (CDFW 2025).
American Badger (*Taxidea taxus*)	CSC	Found in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Adult badgers are primarily nocturnal, foraging at night and remaining underground in sleeping dens during the day.	**Unlikely.** The highly modified, intensive agricultural landscape that comprises and surrounds the study area would not attract or support badgers. There is a historical (but undated) CNDDB occurrence mapped to the general vicinity of the study area (CDFW 2025). The two modern occurrences in the area are both set in the more natural landscapes of the lower foothills, 7.5 to 8.5 miles northeast of the site (iNaturalist 2025).

*** Explanation of Occurrence, Designations, and Status Codes**

Present: Species observed on the site at time of field surveys or during recent past.
Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible: Species not observed on the site, but it could occur there from time to time.
Unlikely: Species not observed on the site, and would not be expected to occur there except, perhaps, as a transient
Absent: Species not observed on the Site and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPT	Federally Proposed Threatened	CSC	California Species of Special Concern
FC	Federal Candidate	CRPR	California Rare Plant Ranking
FPD	Federally (Proposed) Delisted	CFP	California Fully Protected
		CCE	California Candidate Endangered

2.5 JURISDICTIONAL WATERS

Jurisdictional waters are those rivers, creeks, drainages, lakes, ponds, reservoirs, and wetlands that are subject to the authority of the USACE, CDFW, and/or the RWQCB. In general, the USACE regulates navigable waters, tributaries to navigable waters, and wetlands with a continuous surface connection to these waters, 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 disclaimed by the USACE. The CDFW has jurisdiction over waters that have a defined bed and bank. The regulation of jurisdictional waters is discussed in more detail in Section 3.8.

As discussed, the study area contains portions of several constructed waterways and a number of agricultural basins. One of the waterways, the Friant-Kern Canal, has previously been claimed as a water of the U.S. by the USACE and may still meet that definition, given that it interconnects the San Joaquin River (upstream) with the Kern River (downstream) and has "relatively permanent" flows. The remaining features are unlikely to meet the definition of a water of the U.S. but may fall under the jurisdiction of the RWQCB as waters of the State. None of the site's aquatic features are likely to be regulated by CDFW.

2.6 DESIGNATED CRITICAL HABITAT

As will be discussed further in Section 3.0, the USFWS often designates areas of "critical habitat" when it lists species as threatened or endangered. Critical habitat is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

Designated critical habitat is absent from the study area and surrounding lands.

2.7 SENSITIVE NATURAL COMMUNITIES

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.

2.8 WILDLIFE MOVEMENT CORRIDORS

Wildlife movement corridors are routes that animals regularly and predictably follow during seasonal migration, dispersal from native ranges, daily travel within home ranges, and inter-population movements. Movement corridors in California are typically associated with valleys, ridgelines, and rivers and creeks supporting riparian vegetation.

The study area's constructed waterways are all highly maintained features that lack riparian cover. While the waterways may support some terrestrial wildlife movement along their levees or in the channels themselves during dry periods, none are likely to function as regionally important wildlife movement corridors. The Friant-Kern Canal and Poplar Ditch may facilitate fish movements, but these would mostly be non-native species antagonistic to native fish and wildlife populations.

3.0 RELEVANT GOALS, POLICIES, AND LAWS

3.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

In California, any project carried out or approved by a public agency that will result in a direct or reasonably foreseeable indirect physical change in the environment must comply with CEQA. The purpose of CEQA is to ensure that a project's potential impacts on the environment are evaluated and methods for avoiding or reducing these impacts are considered before the project is allowed to move forward. A secondary aim of CEQA is to provide justification to the public for the approval of any projects involving significant impacts on the environment.

According to Section 15382 of the CEQA Guidelines, a significant effect on the environment means a "substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest." Although the lead agency may set its own CEQA significance thresholds, project impacts to biological resources are generally considered to be significant if they would meet any of the following criteria established in Appendix G of the CEQA Guidelines:

- 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 CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS.
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.



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

Furthermore, CEQA Guidelines Section 15065(a) requires the lead agency to make "mandatory findings of significance" if there is substantial evidence that a project may:

- Substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare or threatened species.
- Achieve short-term environmental goals to the detriment of long-term environmental goals.
- Produce environmental effects that are individually limited but cumulatively considerable, meaning that the incremental effects of the project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects.

3.2 NATIONAL ENVIORNMENTAL POLICY ACT

Projects that are proposed, funded, or authorized by federal agencies are generally subject to the provisions of NEPA. Signed into law in 1970 and amended by the Fiscal Responsibility Act of 2023, NEPA requires federal agencies to evaluate the environmental effects of their proposed actions prior to making decisions. Agencies must utilize systematic, interdisciplinary approach that includes the review of technically and economically feasible alternatives to the proposed action, and must ensure professional and scientific integrity in the environmental documents they prepare.

The level of NEPA review that is required is related to a project's potential to cause "significant" environmental effects. Projects with reasonably foreseeable significant effects on the quality of the human environment require an Environmental Impact Statement (EIS). Among other elements, an EIS requires detailed analyses of the project's environmental effects, development and study of a reasonable range of alternatives to the proposed action, and consideration of public comments received during the scoping process. Projects that do not have reasonably foreseeable significant effects on the quality of the human environment, and projects for which the significance of such effects is unknown, may meet their NEPA obligations with the

preparation of an Environmental Assessment (EA). An EA is a concise public document that either provides the basis for a federal agency's finding of no significant impact or culminates in a determination that an EIS is necessary.

3.3 GENERAL PLAN POLICIES OF THE COUNTY OF TULARE

In compliance with CEQA, the lead agency must consider conformance with applicable goals and policies of the General Plan of the County of Tulare. The Tulare County General Plan was adopted in August 2012 and has a planning horizon through 2030. The current policies relevant to the study area's biological resources can be found in Component C: Environmental, Section 8. Environmental Resources Management, and are as follows:

- Protection of environmentally sensitive wildlife and plant life, including species designated as rare, threatened, and/or endangered by State and/or Federal government, are protected
- Development in areas that contain sensitive habitat for special status species be limited or modified and any development
- Encourage cluster development in areas with moderate to high potential for sensitive habitat
- Protect riparian areas through habitat preservation, designation as open space, or recreational land uses, bank stabilization, and development controls
- Preserve and manage wetland and riparian plant communities for passive recreation, groundwater recharge, and wildlife habitats
- Encourage the planting of native trees, shrubs, and vegetation
- Require open space buffer areas between development projects and significant watercourses, riparian vegetation, wetlands, and other sensitive habitat and natural communities
- Support the conservation and management of oak woodland communities and habitats
- Establish and administer a mitigation banking program to evaluate and identify appropriate lands for protection and recovery of threatened and/or endangered species impacted during land development
- Cooperate with State and Federal wildlife agencies



- Coordinate with local, State, and Federal habitat conservation planning efforts to protect critical habitat areas that support special status species

3.4 THREATENED AND ENDANGERED SPECIES

In California, imperiled plants and animals may be afforded special legal protections under the California Endangered Species Act (CESA) and/or Federal Endangered Species Act (FESA). Species may be listed as "threatened" or "endangered" under one or both Acts, and/or as "rare" under CESA. Under both Acts, "endangered" means a species is in danger of extinction throughout all or a significant portion of its range, and "threatened" means a species is likely to become endangered within the foreseeable future. Under CESA, "rare" means a species may become endangered if their present environment worsens. Both Acts prohibit "take" of listed species, defined under CESA as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" (California Fish and Game Code, Section 86), and more broadly defined under FESA to include "harm" (16 USC, Section 1532(19), 50 CFR, Section 17.3). The USFWS commonly interprets "take" to include the loss of habitat utilized by a listed species.

When state and federally listed species have the potential to be impacted by a project, the USFWS and CDFW must be included in the CEQA process. These agencies review the environmental document to determine the adequacy of its treatment of endangered species issues and to make project-specific recommendations for the protection of listed species. Projects that may result in the "take" of listed species must generally enter into consultation with the USFWS and/or CDFW pursuant to FESA and CESA, respectively. In some cases, incidental take authorization(s) from these agencies may be required before the project can be implemented.

3.5 MIGRATORY BIRDS

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

Native birds are also protected under California state law. The California Fish and Game Code makes it unlawful to take or possess any non-game bird covered by the FMBTA (Section 3513), as well as any other native non-game bird (Section 3800), even if incidental to lawful activities.

3.6 BIRDS OF PREY

Birds of prey are also protected in California under provisions of the State Fish and Game Code, Section 3503.5, 1992), which states that it is "unlawful to take, possess, or destroy any birds in the order *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFW.

3.7 NESTING BIRDS

In California, protection is afforded to the nests and eggs of all birds. California Fish and Game Code (Section 3503) states that it is "unlawful to take, possess, or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of "take" by the CDFW.

3.8 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.



3.9 WETLANDS AND OTHER JURISDICTIONAL WATERS

Section 404 of the federal Clean Water Act (CWA) regulates the discharge of dredged or fill material into "navigable waters" (33 U.S.C. §1344), defined in the CWA as "the waters of the United States, including the territorial seas" (33 U.S.C. §1362(7)). The CWA does not supply a definition for waters of the U.S., and that has been the subject of considerable debate since the CWA's passage in 1972. A variety of regulatory definitions have been promulgated by the two federal agencies responsible for implementing the CWA, the Environmental Protection Agency (EPA) and USACE. These definitions have been interpreted, and in some cases, invalidated, by federal courts.

Waters of the U.S. are presently defined by the EPA and USACE's joint 2023 Revised Definition of 'Waters of the U.S.' Rule (2023 WOTUS Rule), issued in January 2023 and amended in August 2023. Generally speaking, waters of the U.S. include:

- Waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide
- The territorial seas
- Interstate waters
- Impoundments of waters otherwise defined as waters of the United States
- Tributaries to other waters of the U.S. that are relatively permanent, standing or continuously flowing bodies of water
- Wetlands adjacent to other waters of the U.S. that have a continuous surface connection to those waters

The 2023 WOTUS Rule also defines a number of exclusions from the definition of waters of the U.S., many of which are longstanding exclusions from earlier regulatory regimes. These generally include:

- Waste treatment systems
- Prior converted cropland



- Ditches excavated wholly in and draining only dry land that do not carry a relatively permanent flow of water
- Certain artificial features, e.g. irrigation basins, swimming pools, borrow pits, and artificially irrigated areas
- Swales and erosional features characterized by low volume, infrequent, or short duration flow

All activities that involve the discharge of dredge or fill material into waters of the U.S. are subject to the permit requirements of the USACE. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values.

Under the Porter-Cologne Water Quality Control Act of 1969, the State Water Resources Control Board (SWRCB) has regulatory authority to protect the water quality of all surface water and groundwater in the State of California ("waters of the State"). Nine RWQCBs oversee water quality at the local and regional level. The RWQCB for a given region regulates discharges of fill or pollutants into waters of the State through the issuance of various permits and orders. Discharges into waters of the State that are also waters of the U.S. require a Section 401 Water Quality Certification from the RWQCB as a prerequisite to obtaining a Section 404 Clean Water Act permit. Discharges into waters of the State that are not also waters of the U.S. require Waste Discharge Requirements (WDRs), or waivers of WDRs, from the RWQCB.

The SWRCB and RWQCBs also administer the federal National Pollution Discharge Elimination System (NPDES) program, which is concerned with the discharge of stormwater and other pollutants into water bodies. Projects that disturb one or more acres of soil must obtain coverage under the SWRCB's current NPDES Construction Stormwater General Permit. A prerequisite for permit coverage is the development of a Storm Water Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. Other types of pollutant discharges into waters of the U.S., such as wastewater, may require coverage under a different NPDES general permit, and in some cases an individual permit.

CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1601 and 1602 of the California Fish and Game Code. Activities that may



substantially modify such waters through the diversion or obstruction of their natural flow, change or use of any material from their bed or bank, or the deposition of debris require a Notification of Lake or Streambed Alteration. If CDFW determines that the activity may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. Such an agreement typically stipulates that certain measures will be implemented to protect the habitat values of the lake or drainage in question.

4.0 IMPACTS AND MITIGATIONS

This impact assessment assumes that: (1) the project will impact approximately 30 acres of the larger 200-acre study area, (2) most project-related disturbance will take place within existing roads and road rights-of-way, (3) the disturbance corridor for pipeline installation will have a width of up to 45 feet, (4) disturbance associated with both pump stations will be confined to an area of approximately 40 feet x 40 feet, (5) no modification to the Friant-Kern Canal is required for the pump stations, and (6) no tree or building removal will be required for any project component.

4.1 POTENTIALLY SIGNIFICANT PROJECT IMPACTS

4.1.1 Potential Project Impacts to Sanford's Arrowhead

Potential Impacts. A population of Sanford's arrowhead consisting of at least 50 plants was found within the on-site PID delivery channel, within areas that may be impacted by construction of a new pump station at this location. If the channel is dewatered, graded, excavated, or otherwise disturbed for this activity, the population may be lost. This species also has some potential to occur in the study area's unnamed ditch, which may be impacted by pump station improvements at that location. Other potentially suitable habitats for the Sanford's arrowhead within the study area include the Poplar Ditch and the vegetated agricultural basin; however, these features are not proposed for impact under current project design.

Project impacts to Sanford's arrowhead associated with construction activities in the PID delivery channel and unnamed ditch are considered potentially significant under CEQA and NEPA.

Mitigation. The following measures will be implemented to reduce the magnitude of potential project impacts to Sanford's arrowhead.

> ***Mitigation Measure 4.1.1a (Protocol Surveys).*** Prior to the start of any work within the PID delivery channel and unnamed ditch, a qualified biologist will conduct protocol-level rare plant surveys following CDFW's 2018 *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*, or most current agency guidance. Surveys will be conducted when local populations of

Sanford's arrowhead are in bloom and readily identifiable. Any populations of Sanford's arrowhead that are found during the survey will be quantified and mapped.

Mitigation Measure 4.1.1b (Avoidance). Project design will be modified, if at all feasible, to avoid on-site populations of Sanford's arrowhead. A qualified biologist will identify an appropriate buffer around the plants; no developments or other project-related activities will be permitted within, and no dewatering or any other activities that introduce hydrological changes will be permitted.

Mitigation Measure 4.1.1c (Salvage Plan). If it is not feasible to avoid on-site Sanford's arrowhead population(s), the affected population(s) will be salvaged in accordance with a plan prepared by a qualified biologist that will include contingencies for an unsuccessful salvage effort. Elements of the plan will describe the timing and methods of salvage/relocation and identify a suitable and feasible relocation site(s). The plan will also include relocation success criteria, methods for monitoring the success of the relocation, and contingencies if relocation is unsuccessful. Because species within the *Sagittaria* genus are most commonly propagated through collection and replanting of roots and/or tubers, not all onsite Sanford's arrowhead plants will require salvaging. Only enough plant material will need to be collected in order to populate an area equal or greater than the area of Sanford's arrowhead impacted by the project, at transplanted plant spacing recommended in the salvage plan.

Compliance with the above mitigation measures would reduce impacts to the Sanford's arrowhead to a less than significant level under CEQA and NEPA.

4.1.2 Potential Project Impacts to Swainson's Hawk

The Swainson's hawk, a state-listed species, is known to nest within the vicinity of the study area. There are many suitable nest trees for this species within and adjacent to the study area. Although no tree removal is anticipated for this project, Swainson's hawks that nest on or near the site would be at risk of construction-related disturbance, leading to nest abandonment or reduced nesting success. Project activities that injure, kill, or reduce the nesting success of Swainson's hawks would violate state and federal laws and be considered a significant impact under CEQA and NEPA.

Swainson's hawks are also likely to forage in the study area from time to time. Individuals of this species would not be vulnerable to construction-related injury or mortality while foraging because they are highly mobile during this activity and are expected to avoid active work areas. This project is not expected to significantly impact this species through loss of foraging habitat. Although portions of agricultural and fallow fields suitable for Swainson's hawk foraging may



be disturbed during pipeline installation activities, all such habitats are expected to return to pre-project levels of suitability following construction. Considerable habitat of similar or higher quality for this species will remain available in the project vicinity both during and following project implementation.

Mitigation. The following measures will be implemented to reduce the magnitude of potential project impacts to Swainson's hawk.

> ***Mitigation Measure 4.1.2a (Construction Timing).*** If feasible, project construction will occur entirely outside the Swainson's hawk nesting season, typically defined as March 1-September 15.
>
> ***Mitigation Measure 4.1.2b (Preconstruction Surveys).*** If construction activities must occur between March 1 and September 15, then within 10 days prior to the start of any work within this period, a qualified biologist will conduct preconstruction surveys for Swainson's hawk nests within ½ mile of the study area.
>
> ***Mitigation Measure 4.1.2c (Avoidance of Active Nests).*** Should any active nests be discovered within the survey area, an appropriate disturbance-free buffer will be established based on local conditions and agency guidelines. Disturbance free buffers will be identified on the ground with flagging, fencing, or by other easily visible means and will be maintained until a qualified biologist has determined that the young have fledged and are capable of foraging independently.

Implementation of these measures will reduce project-related impacts to the Swainson's hawk to a less than significant level under CEQA and NEPA and facilitate compliance with state and federal laws protecting this species.

4.1.3 Potential Project Impacts to Nesting Birds and Raptors including the Tricolored Blackbird

Potential Impacts. The study area has the potential to be used for nesting by a variety of nesting migratory birds and raptors protected by state and federal law, including the tricolored blackbird, a California threatened species. If project construction takes place during the nesting season, birds nesting on the site could be injured or killed by construction activities, while birds nesting on or adjacent to the site could be disturbed such that they would abandon their nests. Construction-related mortality of nesting birds and disturbance leading to nest abandonment

would violate state and federal laws and be considered a significant impact of the project under CEQA and NEPA.

Mitigation. To avoid and minimize the potential for construction-related mortality/disturbance of nesting birds, the following measures will be implemented:

> ***Measure 4.1.3a (Construction Timing).*** If feasible, the project will be implemented outside of the avian nesting season, typically defined as February 1 to August 31.
>
> ***Measure 4.1.3b (Preconstruction Surveys).*** If construction is to occur between February 1 and August 31, a qualified biologist will conduct pre-construction surveys for active bird nests within 10 days prior to the start of any work within this period. The survey area will encompass the work area and surrounding lands within 500 feet for raptors, 300 feet for tricolored blackbirds, and 250 feet for other nesting birds.
>
> ***Measure 4.1.3c (Avoidance of Active Nests).*** Should any active nests be discovered in or near proposed construction zones, the biologist will identify a suitable construction-free buffer around the nest. The buffer distance will be determined based on species biology, site-specific conditions, and the level of project-related disturbance that is anticipated near the nest(s) in question. Buffers will be identified on the ground with flagging or fencing and will be maintained until the biologist has determined that the young have fledged and are capable of foraging independently.

Implementation of the above measures will reduce project impacts to nesting birds to a less than significant level under CEQA and NEPA and facilitate compliance with state and federal laws.

4.2 LESS THAN SIGNIFICANT PROJECT IMPACTS

4.2.1 Project Impacts to Special Status Plant Species

Potential Impacts. Of the twenty-one special status plant species that have been documented in the regional vicinity of the study area, twenty are considered absent or unlikely to occur due to the absence of suitable habitat and/or the site's being located outside of the species' distribution (see Table 2). These comprise the following: California jewel flower (*Caulanthus californicus*), Springville clarkia (*Clarkia springvillensis*), striped adobe-lily (*Fritillaria striata*), San Joaquin woolythreads (*Monolopia congdonii*), San Joaquin adobe sunburst (*Pseudobahia peirsonii*), Keck's checkerbloom (*Sidalcea keckii*), Earlimart orache (*Atriplex cordulata* var. *erecticaulis*), Lost Hills crownscale (*Atriplex coronata* var. *vallicola*), brittlescale (*Atriplex depressa*), lesser saltscale (*Atriplex minuscula*), vernal pool smallscale (*Atriplex persistens*), subtle orache



(*Atriplex subtilis*), recurved larkspur (*Delphinium recurvatum*), calico monkeyflower (*Diplacus pictus*), spiny-sepaled button celery (*Eryngium spinosepalum*), alkali-sink goldfields (*Lasthenia chrysantha*), Madera leptosiphon (*Leptosiphon serrulatus*), shining navarretia (*Navarretia nigelliformis* spp. *radians*), California alkali grass (*Puccinellia simplex*), and chaparral ragwort (*Senecio aphanactis*). These species are not expected to be affected, directly or indirectly, by the project because they have no appreciable potential to occur on site. Potential impacts to these species are considered less than significant under CEQA and NEPA.

Mitigation. Mitigation measures are not warranted.

4.2.2 Project Impacts to Special Status Animal Species Absent from, or Unlikely to Occur within, the Study Area

Potential Impacts. Of the 19 special status animal species that potentially occur in the general vicinity of the site, 12 are considered absent or unlikely to occur within the study area due to the absence of suitable habitat, and/or the study area's being situated outside of the species' known distribution (see Table 2). These are the Crotch bumble bee (*Bombus crotchii*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool fairy shrimp (*Branchinecta lynchi*), western spadefoot (*Spea hammondii*), northwestern pond turtle (*Actinemys marmorata*), blunt-nosed leopard lizard (*Gambelia sila*), northern California legless lizard (*Anniella pulchra*), California condor (*Gymnogyps californianus*), Buena Vista Lake ornate shrew (*Sorex ornatus relictus*), Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*), American badger (*Taxidea taxus*) and San Joaquin kit fox (*Vulpes macrotis mutica*). The project is not expected to affect these species through construction mortality/disturbance or loss of habitat because there is little or no likelihood that they utilize the site.

Mitigation. Mitigation is not warranted.

4.2.3 Potential Project Impacts to Roosting Bats

Potential Impacts. The study area contains a number of mature trees, buildings, and other features that have the potential to support roosting bats, possibly including the pallid bat (*Antrozous pallidus*), Townsend's big eared bat (*Corynorhinus townsendii*), and western mastiff

bat (*Eumops perotis californicus*), all California Species of Special Concern. No such features will be impacted under current project design, however. Roosting bats would not be vulnerable to construction-related injury or mortality, and project impacts are considered less than significant under CEQA and NEPA.

The pallid bat, Townsend's big-eared bat, and western mastiff bat may also forage on or over the study area, but would not be vulnerable to construction-related injury or mortality during this activity because they are highly mobile foragers and would presumably avoid active work areas. This project will not adversely affect these species through loss of foraging habitat because impacts will be small-scale and overwhelmingly temporary, with permanent above-ground impacts limited to the proposed pump station improvements. Moreover, considerable habitat of similar or higher quality will remain available in the project vicinity during and following development.

Mitigation. Mitigation is not warranted.

4.2.4 Potential Project Impacts to Special Status Animal Species that Would Use the Study Area for Non-sensitive Activities Only

Potential Impacts. Two special status animal species, the monarch butterfly (*Danaus plexippus*) and yellow-breasted chat (*Icteria virens*), have the potential to occur within the study area, but are not expected to use the site for sensitive activities such as breeding or nesting. Both species may forage on site from time to time, and monarch individuals may also roost in the study area's trees during migratory stopovers. These species are highly mobile outside of sensitive periods and would presumably depart the work area if disturbed, such that they would not be at risk of construction-related injury or mortality.

The project would not adversely affect the monarch or yellow-breasted chat through loss of habitat. The site does not offer unique habitat for these species, nor is it likely to represent an important part of any individual home range, given its developed nature. Similar and higher quality habitats are regionally abundant. For these reasons, impacts to the monarch butterfly and yellow-breasted chat are considered less than significant under CEQA and NEPA.



Mitigation. Mitigation is not warranted.

4.2.5 Project Impacts to Riparian Habitat and Sensitive Natural Communities

Potential Impacts. The project does not contain riparian habitat or any sensitive natural communities. There will be no impact to such resources.

Mitigation. Mitigation measures are not warranted.

4.2.6 Potential Project Impacts to Waters of the State and U.S.

Potential Impacts. As discussed, any of the study area's aquatic features may be regulated by the RWQCB, and the Friant-Kern Canal may also fall under USACE jurisdiction. The project will not impact the Friant-Kern Canal, Poplar Ditch, or on-site agricultural basins. The proposed pump station improvements may affect the on-site PID delivery channel and unnamed ditch; however, activities at these locations will be small-scale and are not expected to substantially alter the ecological function and value of these constructed waterways. Project impacts to Waters of the U.S. and State are therefore considered less than significant under CEQA and NEPA.

Mitigation. Mitigation is not warranted.

4.2.7 Project Impacts to Wildlife Movement Corridors

Potential Impacts. As discussed, the site's constructed waterways may facilitate some wildlife movement, but none are likely to function as an important movement corridor. The project is not expected to alter the ecological function and value of these waterways and any disturbance they receive would be temporary. Project impacts to wildlife movement corridors are considered less than significant under CEQA and NEPA.

Mitigation. Mitigation is not warranted.

4.2.8 Project Impacts to Designated Critical Habitat

Potential Impacts. The project will have no effect on designated critical habitat because critical habitat is absent from the study area and adjacent lands.

Mitigation. Mitigation is not warranted.

4.2.9 Local Policies or Habitat Conservation Plans

Potential Impacts. It is assumed that the project will be implemented in a manner consistent with Tulare County General Plan policies related to biological resources. The project does not appear to be subject to any HCPs or NCCPs.

Mitigation. No mitigation is required.

4.3 SECTION 7 DETERMINATIONS FOR FEDERALLY LISTED SPECIES

Table 3 below presents LOA's preliminary FESA Section 7 effect determinations for federally listed and proposed species found on the USFWS IPaC list and CNDDB list generated for the project, based on currently available information and a level of analysis appropriate for a CEQA Mitigated Negative Declaration and/or NEPA Environmental Assessment. Candidate species are not included in Table 3 because they do not require Section 7 consultation.

Table 3: Section 7 Effect Determinations for Federally Listed Species

Species	FESA Status	Determination	Rationale for the Determination
San Joaquin Adobe Sunburst *(Pseudobahia peirsonii)*	Threatened	***No effect***	Species is absent (no suitable habitat)
Springville Clarkia *(Clarkia springvillensis)*	Threatened	***No effect***	Species is absent (no suitable habitat)
Monarch Butterfly *(Danaus plexippus)*	Proposed Threatened	***No jeopardy***	Only anticipated to utilize the site for occasional foraging and/or roosting during migratory stopovers; no project-related take anticipated
Vernal Pool Fairy Shrimp *(Branchinecta lynchi)*	Threatened	***No effect***	No appreciable potential to occur on site (no suitable habitat)
Northwestern Pond Turtle *(Actinemys marmorata)*	Proposed Threatened	***No jeopardy***	No appreciable potential to occur on site (landscape-level factors, no suitable habitat)
Western Spadefoot *(Spea hammondii)*	Proposed Threatened	***No jeopardy***	No appreciable potential to occur on site (landscape-level factors, no suitable habitat)
Blunt-nosed Leopard Lizard *(Gambelia sila)*	Endangered	***No effect***	Species is absent (no suitable habitat)

Table 3: Section 7 Effect Determinations for Federally Listed Species

Species	FESA Status	Determination	Rationale for the Determination
California Condor (*Gymnogyps californianus)*	Endangered	*No effect*	Species is absent (no suitable habitat)
Buena Vista Lake Ornate Shrew (*Sorex ornatus relictus*)	Endangered	*No effect*	Species is absent (no suitable habitat)
Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*)	Endangered	*No effect*	Species is absent (no suitable habitat)
San Joaquin Kit Fox (SJKF) (*Vulpes macrotis mutica*)	Endangered	*No effect*	No appreciable potential for species to occur on site (landscape-level factors, marginal to unsuitable habitat, no known occurrences in vicinity for 25+ years)

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APPENDIX A: VASCULAR PLANTS OF THE STUDY AREA

APPENDIX A: VASCULAR PLANTS OF THE STUDY AREA

The plant species listed below were observed in the study area during surveys conducted by Live Oak Associates, Inc. on June 30, 2025. The wetland indicator status of each plant, derived from the USACE-administered National Wetland Plant List for the Arid West Region, has been shown following its common name if available.

OBL - Obligate
FACW - Facultative Wetland
FAC - Facultative
FACU - Facultative Upland
UPL - Upland
NR - No review
NA - No agreement
NI - No investigation

ADOXACEAE – Elder Family		
Sambucus mexicana	Blue Elderberry	UPL
ADOXACEAE – Elder Family		
Livistona chinensis	Chinese Fan Palm	
Washingtonia spp.	Palm	FAC
ALISMATACEAE- Water-plantain Family		
Sagittaria sanfordii	Sanford's Arrowhead	OBL
AMARATHACEAE- Amaranth Family		
Amaranthus retroflexus	Red-root Amaranth	FACU
Atriplex lentiformis	Big Saltbrush	FACU
ANACARDIACEAE- Cashew Family		
Sinchus molle	Peruvian Peppertree	UPL
Pistacia vera	Pistachio	UPL
APOCYNACEAE – Dogbane Family		
Nerium oleander	Oleander	UPL
ASPARAGACEAE – Asparagus Family		
Agave spp.	Agave	UPL
ASTERACEAE – Sunflower Family		
Ambrosia acanthocarpa	Ragweed	UPL
Erigeron canadensis	Canada Horseweed	FACU
Helianthus annuus	Annual Sunflower	FACU
Heterotheca grandiflora	Telegraph Weed	UPL
Lactuca serriola	Prickly Lettuce	FACU
BORAGINACEAE – Borage Family		
Amsinckia sp.	Fiddleneck	UPL
BRASSICACEAE – Mustard Family		
Capsella bursa-pastoris	Shepherd's Purse	FACU
Rhamphospermum nigrum	Black Mustard	UPL
BUXACEAE – Box Family		
Buxus spp.	Boxwood	UPL

CACTACEAE – Cactus Family		
Opuntia spp.	Prickly Pear	UPL
CUPRESSACEAE – Cypress Family		
Cupressus sempervirens	Mediterranean Cypress	UPL
Cupressus spp.	Cypress	UPL
Sequoia sempervirens	California Redwood	UPL
CONVOLVULACEAE – Bindweed Family		
Convolvulus arvensis	Field Bindweed	FACU
CYPERACEAE – Umbrella Sedge Family		
Cyperus eragrostis	Umbrella Sedge	FACW
EUPHORBIACEAE – Spurge Family		
Croton setiger	Turkey Mullein	UPL
Ricinus communis	Castor Bean	FACU
FABACEAE—Pea Family		
Albizia julibrissin	Mimosa Tree	UPL
Cercis occidentalis	Western Redbud	UPL
FAGACEAE – Oak Family		
Quercus lobata	Valley Oak	FACU
JUGLANDACEAE – Walnut Family		
Carya illinoinensis	Pecan	FAC
Juglans californica	California Walnut	FACU
MALVACEAE – Mallow Family		
Malva parviflora	Mallow	UPL
MYRTACEAE – Myrtle Family		
Eucalyptus spp.	Eucalyptus	
Eucalyptus globulus	Blue Gum	UPL
MORACEAE – Mulberry Family		
Ficus carica	Edible Fig	FACU
Morus alba	White Mulberry	FACU
OLEACEAE – Olive Family		
Ligustrum spp.	Privet	UPL
Olea europaea	Olive	UPL
PINACEAE – Pine Family		
Pinus jeffreyi	Jeffrey Pine	UPL
Pinus spp.	Pine	
POACEAE – Grass Family		
Avena fatua	Wild Oats	UPL
Bromus diandrus	Ripgut Brome	UPL
Bromus rubens	Red Brome	UPL
Cynodon dactylon	Bermuda Grass	FACU
Digitaria sanguinalis	Crabgrass	FACU
Echinochloa crus-galli	Barnyard Grass	FACW
Hordeum murinum	Wall Barley	FACU
Leptochloa fusca	Bearded Sprangletop	UPL
Poa annua	Annual Bluegrass	FAC
Sorghum halepense	Johnson Grass	FACU

Zea mays	Corn	UPL
POLYGONACEAE – Smartweed Family		
Rumex crispus	Curly Dock	FAC
ROSACEAE – Rose Family		
Prunus domestica	False Plum	
Prunus dulcis	Almond	UPL
RUTACEAE – Citrus Family		
Citrus x *sinensis*	Orange	UPL
SALICACEAE – Willow Family		
Populus fremontii	Fremont's Cottonwood	UPL
Salix laevigata	Red Willow	FACW
SOLANACEAE – Nightshade Family		
Datura wrightii	Sacred Thorn Apple	UPL
Solanum eleagnifolium	Silverleaf Nightshade	UPL
ULMACEAE – Elm Family		
Ulmus americana	American Elm	UPL
VITACEAE – Grape Family		
Vitis vinifera	Cultivated Grape	
ZYGOPHYLLACEAE—Creosote-bush Family		
Tribulus terrestris	Punctureveine	UPL

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR IN THE STUDY AREA

APPENDIX B: TERRESTRIAL VERTEBRATE SPECIES THAT POTENTIALLY OCCUR ON THE STUDY AREA

The species listed below are those that may be expected to routinely and predictably use or pass through the study area during some or all of the year. The list was not intended to include birds that are vagrants or occasional transients. Terrestrial vertebrate species observed in or adjacent to the study area during surveys conducted by Live Oak Associates, Inc. on June 30, 2025 have been noted with an asterisk.

CLASS: AMPHIBIA (Amphibians)
ORDER: SALIENTIA (Frogs and Toads)
FAMILY: BUFONIDAE (True Toads)
Western Toad (*Bufo boreas*)
FAMILY: HYLIDAE (Treefrogs and relatives)
Sierran Treefrog (*Pseudacris sierra*)
FAMILY: RANIDAE (True Frogs)
Bullfrog (*Lithobates catesbeianus*)

CLASS: REPTILIA (Reptiles)
ORDER: SQUAMATA (Lizards and Snakes)
SUBORDER: SAURIA (Lizards)
FAMILY: PHRYNOSOMATIDAE
Western Fence Lizard (*Sceloporus occidentalis*)
Side-blotched Lizard (*Uta stansburiana*)
SUBORDER: SERPENTES (Snakes)
FAMILY: COLUBRIDAE (Colubrids)
Pacific Gopher Snake (*Pituophis catenifer catenifer*)
Common Kingsnake (*Lampropeltis getulus*)
Common Garter Snake (*Thamnophis sirtalis*)
FAMILY: VIPERIDAE (Vipers)
Western Rattlesnake (*Crotalus viridis*)

CLASS: AVES
ORDER: ANSERIFORMES (Ducks, Geese, and Swans)
FAMILY: ANATIDAE (Ducks, Geese, and Swans)
*Mallard (*Anas platyrhynchos*)
Gadwall (*Anas strepera*)
American Wigeon (*Mareca americana*)
Northern Shoveler (*Anas crecca*)
Ruddy Duck (*Oxyura jamaicensis*)
Common Merganser (*Mergus Anseriformes*)
ORDER: PELECANIFORMES (Wading Birds)
FAMILY: ARDEIDAE (Herons)
Great Egret (*Ardea alba*)
Great Blue Heron (*Ardea herodias*)
Snowy Egret (*Egretta thula*)

ORDER: ACCIPITRIFORMES (Hawks, Eagles, Vultures, and Kites)
FAMILY: CATHARTIDAE (New World Vultures)
*Turkey Vulture (*Cathartes aura*)
FAMILY: ACCIPITRIDAE (Hawks, Eagles, Kites, Old World Vultures, and Harriers)
Cooper's Hawk (*Accipiter cooperii*)
*Red-tailed Hawk (*Buteo jamaicensis*)
Red-shouldered Hawk (*Buteo lineatus*)
Swainson's Hawk (*Buteo swainsoni*)
FAMILY: FALCONIDAE (Caracaras and Falcons)
*American Kestrel (*Falco sparverius*)
ORDER: GALLIFORMES (Megapodes, Currassows, Pheasants, and Relatives)
FAMILY: ODONTOPHORIDAE (New World Quails)
California Quail (*Callipepla californica*)
FAMILY: PHASIANIDAE (Pheasants, Chickens, Turkeys and Allies)
*Domestic Chicken (*Gallus domesticus*)
ORDER: GRUIFORMES (Cranes and Rails)
FAMILY: RALLIDAE (Rails, Gallinules, and Coots)
American Coot (*Fulica americana*)
ORDER: CHARADRIIFORMES (Shorebirds, Gulls, and relatives)
FAMILY: CHARADRIIDAE **(Plovers and relatives)**
*Killdeer (*Charadrius vociferus*)
FAMILY: SCOLOPACIDAE (Sandpipers and Allies)
Wilson's Snipe (*Gallinago delicata*)
ORDER: CUCULIFORMES (Cuckoos)
FAMILY: CUCULIDAE (Cuckoos)
Greater Roadrunner (*Geococcyx californianus*)
ORDER: COLUMBIFORMES (Pigeons and Doves)
FAMILY: COLUMBIDAE (Pigeons and Doves)
Rock Dove (*Columba livia*)
*Eurasian Collared Dove (*Streptopelia decaocto*)
*Mourning Dove (*Zenaida macroura*)
ORDER: STRIGIFORMES (Owls)
FAMILY: TYTONIDAE (Barn Owls)
*Barn Owl (*Tyto alba*)
ORDER: APODIFORMES (Swifts and Hummingbirds)
FAMILY: TROCHILIDAE (Hummingbirds)
Black-chinned Hummingbird (*Archilochus alexandri*)
Anna's Hummingbird (*Calypte anna*)
ORDER: PASSERIFORMES (Perching Birds)
FAMILY: TYRANNIDAE (Tyrant Flycatchers)
Black Phoebe (*Sayornis nigricans*)
Say's Phoebe (*Sayornis saya*)
*Western Kingbird (*Tyrannus verticalis*)
FAMILY: CORVIDAE (Jays, Magpies, and Crows)
*California Scrub Jay (*Aphelocoma coerulescens*)
*American Crow (*Corvus brachyrhynchos*)

Common Raven (*Corvus corax*)
FAMILY: ALAUDIDAE (Larks)
Horned Lark (*Eremophila alpestris*)
FAMILY: HIRUNDINIDAE (Swallows)
*Cliff Swallow (*Petrochelidon pyrrhonota*)
Barn Swallow (*Hirundo rustica*)
Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)
FAMILY: AEGITHALIDAE (Titmice)
Oak Titmouse (*Baeolophus inornatus*)
FAMILY: AEGITHALIDAE (Bushtits)
Bushtit (*Psaltriparus minimus*)
FAMILY: TURDIDAE (Thrushes)
Western Bluebird (*Sialia mexicana*)
American Robin (*Turdus migratorius*)
FAMILY: MIMIDAE (Mockingbirds and Thrashers)
*Northern Mockingbird (*Mimus polyglottos*)
FAMILY: PARULIDAE (Wood Warblers and Relatives)
Yellow-rumped Warbler (*Dendroica coronata*)
FAMILY: STURNIDAE (Starlings and Allies)
*European Starling (*Sturnus vulgaris*)
FAMILY: MOTACILLIDAE (Wagtails and Pipits)
American Pipit (*Anthus rubrescens*)
FAMILY: EMBERIZIDAE (Sparrows)
Savannah Sparrow (*Passerculus sandwichensis*)
White-crowned Sparrow (*Zonotrichia leucophrys*)
Golden-crowned Sparrow (*Zonotrichia atricapilla*)
California Towhee (*Pipilo crissalis*)
FAMILY: ICTERIDAE (Blackbirds, Orioles and Allies)
Western Meadowlark (*Sturnella neglecta*)
Red-winged Blackbird (*Agelaius phoeniceus*)
Great-tailed Grackle (*Quiscalus mexicanus*)
Brewer's Blackbird (*Euphagus cyanocephalus*)
Brown-headed Cowbird (*Molothrus ater*)
Bullock's Oriole (*Icterus bullockii*)
FAMILY: ICTERIIDAE (Yellow-breasted Chat)
*Yellow-breasted Chat (*Icteria virens*)
FAMILY: FRINGILLIDAE (Finches)
*House Finch (*Haemorhous mexicanus*)
Lawernce's Goldfinch (*Spinus lawrencei*)
Lesser Goldfinch (*Carduelis psaltria*)
FAMILY: PASSERIDAE (Old World Sparrows)
*House Sparrow (*Passer domesticus*)

CLASS: MAMMALIA
ORDER: DIDELPHIMORPHIA (Marsupials)
FAMILY: DIDELPHIDAE (Opossums)

Virginia Opossum (*Didelphis virginiana*)

ORDER: INSECTIVORA (Shrews and Moles)

FAMILY: TALPIDAE (Moles)

Broad-footed Mole (*Scapanus latimanus*)

ORDER: CHIROPTERA (Bats)

FAMILY: VESPERTILIONIDAE (Vespertilionid Bats)

Pallid Bat (*Antrozous pallidus*)

Townsend's Big-eared Bat (*Corynorhinus townsendii pallescens*)

Big Brown Bat (*Eptesicus fuscus*)

Yuma Myotis (*Myotis yumanensis*)

California Myotis (*Myotis californicus*)

Western Pipistrelle (*Pipistrellus hesperus*)

FAMILY: MOLOSSIDAE (Free-tailed Bat)

Western Mastiff Bat (*Eumops perotis californicus*)

Brazilian Free-tailed Bat (*Tadarida brasiliensis*)

ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)

FAMILY: LEPORIDAE (Rabbits and Hares)

Audubon's Cottontail (*Sylvilagus audubonii*)

Black-tailed Jackrabbit (*Lepus californicus*)

ORDER: RODENTIA (Rodents)

FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)

*California Ground Squirrel (*Otospermophilus beecheyi*)

FAMILY: GEOMYIDAE (Pocket Gophers)

Botta's Pocket Gopher (*Thomomys bottae*)

FAMILY: MURIDAE (Mice, Rats and Voles)

Western Harvest Mouse (*Reithrodontomys megalotis*)

Deer Mouse (*Peromyscus maniculatus*)

Norway Rat (*Rattus norvegicus*)

House Mouse (*Mus musculus*)

California Vole (*Microtus californicus*)

ORDER: CARNIVORA (Carnivores)

FAMILY: CANIDAE (Foxes, Wolves, and Relatives)

Red Fox (*Vulpes vulpes*)

Coyote (*Canis latrans*)

*Domestic Dog (*Canis familiaris*)

FAMILY: PROCYONIDAE (Raccoons and Relatives)

Raccoon (*Procyon lotor*)

FAMILY: MUSTELIDAE (Weasels and Relatives)

Striped Skunk (*Mephitis mephitis*)

FAMILY: FELIDAE (Cats)

*Feral Cat (*Felis catus*)

ORDER: PERISSODACTYLA (Odd Toed Ungulates)

FAMILY: EQUIDAE (Horses and Relatives)

*Horse (*Equus ferus caballus*)

APPENDIX C: SELECTED SITE PHOTOGRAPHS



Photo 1: Location of proposed pump station. Friant-Kern Canal on the left and PID delivery channel containing Sanford's arrowhead on the right.



Photo 2: PID delivery channel containing Sanford's arrowhead population. Fraint-Kern Canal in background.



Photo 3: Location of proposed improvements to existing pump station at PID turnout along the Friant-Kern Canal south of SR 190. Unnamed ditch in background.



Photo 4: One of the study area's agricultural basins.



Photo 5: Representative photo of paved roadway with residential housing and agricultural land.



Photo 6: Representative photo of orchard next to fallow field with a large tree suitable for nesting raptors in background.



Photo 7: Representative photo of agricultural lands next to a landscaped residential home.



Photo 8: Pipeline location near Poplar Ditch.

APPENDIX D: USFWS INFORMATION FOR PLANNING AND CONSULTATION OFFICIAL SPECIES LIST

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To: 06/17/2025 19:09:44 UTC
Project Code: 2025-0110651
Project Name: PID Service Area 3 Pipelines

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

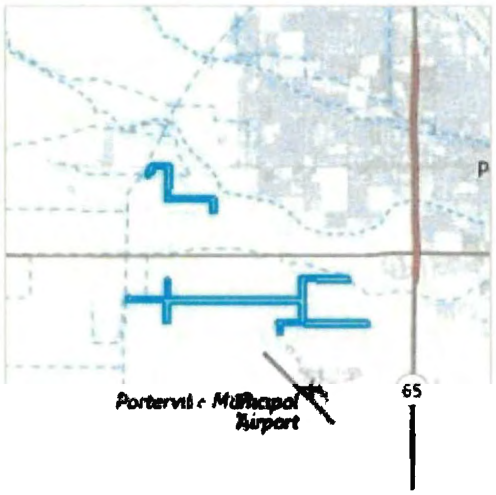
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

PROJECT SUMMARY

Project Code: 2025-0110651
Project Name: PID Service Area 3 Pipelines
Project Type: Irrigation
Project Description: Construction of pumping station, upgrade to an existing pump station, and below ground installation of irrigation pipeline totaling approximately 28,600 feet.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@36.0420327,-119.0892343488707,14z



Counties: Tulare County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 11 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME STATUS

Buena Vista Lake Ornate Shrew *Sorex ornatus relictus* — Endangered
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/1610

San Joaquin Kit Fox *Vulpes macrotis mutica* — Endangered
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/2873

Tipton Kangaroo Rat *Dipodomys nitratoides nitratoides* — Endangered
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/7247

BIRDS

NAME STATUS

California Condor *Gymnogyps californianus* — Endangered
Population: Wherever found, except where listed as an experimental population
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/8193

REPTILES

NAME STATUS

Blunt-nosed Leopard Lizard *Gambelia silus* — Endangered
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/625

Northwestern Pond Turtle *Actinemys marmorata* — Proposed Threatened
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/1111

AMPHIBIANS

NAME STATUS

Western Spadefoot *Spea hammondii* — Proposed Threatened
Population: Northern DPS
No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/5425

INSECTS

NAME STATUS

Monarch Butterfly *Danaus plexippus* — Proposed Threatened
There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRUSTACEANS

NAME STATUS

Vernal Pool Fairy Shrimp *Branchinecta lynchi* Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

Species profile: https://ecos.fws.gov/ecp/species/498

FLOWERING PLANTS

NAME STATUS

San Joaquin Adobe Sunburst *Pseudobahia peirsonii* Threatened

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/2931

Springville Clarkia *Clarkia springvillensis* Threatened

No critical habitat has been designated for this species.

Species profile: https://ecos.fws.gov/ecp/species/8309

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: County of Madera
Name: Natalie Neff
Address: 33930 Sierra Way
Address Line 2: #B
City: Oakhurst
State: CA
Zip: 93644
Email neneff92@gmail.com
Phone: 5596424880

LEAD AGENCY CONTACT INFORMATION

Lead Agency: County of Tulare

APPENDIX D

CULTURAL RESOURCES REPORT

SOUTHEAST SERVICE AREA (SERVICE AREA 3)
LATERAL PIPELINE PROJECT

PORTERVILLE IRRIGATION DISTRICT

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

Cultural Resources Assessment
Porterville Irrigation District
Service Area 3 Pipeline Installation Project,
Porterville, CA 93257
Tulare County, California

SINCE 1949

Prepared for
Porterville Irrigation District
22086 Ave 160
Porterville, CA 93257

Prepared by
1322 E Shaw Ave.
Fresno, CA 93710

Heather Froshour, MA, RPA Principal Archaeologist

August 14, 2025

EXECUTIVE SUMMARY

Soar Environmental Consulting, Inc. (Soar Environmental) was retained by Dennis R. Keller Consulting Civil Engineer, Inc. (Client), the District consulting engineer for the Porterville Irrigation District (The District), to prepare a Cultural Resources Assessment for the Service Area 3 Pipeline Project on the outskirts of the city of Porterville (City), in accordance with the California Environmental Quality Act (CEQA) prior to implementation of the proposed Project. The proposed project is to install pipelines from 8 to 42 inches in diameter adjacent to the Friant-Kern Canal. The total length of pipeline installation is approximately 28,600 feet. The Project also includes the construction of one new pump station and the upgrade of an existing pump station. The proposed project is approximately 5.4 miles of proposed irrigation pipeline bounded by Avenue 152 to the north, State Road 65/All America City Highway to the east, West Scranton Avenue to the south, and the Friant-Kern Canal to the west. The purpose of the Phase 1 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 Eastern Information Center (EIC), as well as a Sacred Lands File & Native American Contacts List Request through the Native American Heritage Commission (NAHC).

The record searches indicate no recorded resources in the Project area. The results of the records search indicate three (3) cultural resource(s) recorded within 0.50-mile of the Project area. The pedestrian survey identified no recorded 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) in support of the proposed new pipeline installation, pump station construction and existing pump station upgrade in the outskirts of the city of Porterville, California (Figure 1). This CRA report is prepared pursuant to the California Environmental Quality Act (CEQA), PRC Sections 21082, 21083.2, and 21084.1, and California Code of Regulations 15064.5.

Heather Froshour completed the archival review, field survey, and prepared this Phase 1 report. Julie Federico assisted in the field survey. 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 Environmental 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 (SSJVC) for the Project area, as well as 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 three (3) recorded resources within a 0.5-mile radius of the Project area. The records search revealed that three (3) previous cultural resources surveys have been conducted in the Project area. Seventeen 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 four (4) individuals representing four (4) Native American tribal groups to find out if they have additional information about the Project area. Soar Environmental sent outreach letters to all four (4) recommended tribal individuals. One (1) tribe, the Table Mountain Rancheria, provided a response. The Table Mountain Rancheria stated that the proposed project site is beyond their area of interest.

Soar Environmental conducted an intensive pedestrian survey of the project on July 3, 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.

It is recommended, however, in the event that cultural resources are encountered during construction activities associated with the Project, a qualified archaeologist shall be obtained to assess the significance of the find in accordance with the criteria set forth in CEQA Guidelines 15064.5(f). In addition, the Health and Safety Code 7050.5, CEQA 15064.5(e), and Public Resources Code 5097.98 mandate the process to be followed in the unlikely event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

1.1 Project Description

The Project proposes new pipeline installation, pump station construction and existing pump station upgrade in the outskirts of the city of Porterville in Tulare County (Figure 1). The proposed project is approximately 5.4 miles of proposed irrigation pipeline bounded by Avenue 152 to the north, State Road 65/All America City Highway to the east, West Scranton Avenue to the south, and the Friant-Kern Canal to the west (Figure 2).

The project is for the proposed installation of pipelines from 8 to 42 inches in diameter, the construction of a new pump station, and the upgrade of an existing pump station. Work will also be done along the Friant-Kern Canal. It is anticipated that widths up to 45 feet will be required to facilitate construction. Almost all construction will occur on unpaved farm access roads and existing paved road rights-of-way.

1.2 Existing Condition

The Project area is located in the San Joaquin Valley, approximately 5.4 miles of proposed irrigation pipeline bounded by Avenue 152 to the north, State Road 65/All America City Highway to the east, West Scranton Avenue to the south, and the Friant-Kern Canal to the west. (Figure 1). The Project area is approximately 73 feet (223.5 meters) southwest of Tule River and approximately 12.41miles (19.97 kilometers) east of State Route 99/Golden State Boulevard. The Project area is located in Tulare County within Township 21 South, Range 26 East, Sections 31 & 32, and Township 22 South, Range 27 East, Sections 3, 4, 5, and 6, Mount Diablo Base Meridian, as depicted on the Porterville, CA 7.5' U.S. Geological Survey (USGS) topographical quadrangle (Figure 1).

1.0 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 for cultural resources are governed primarily by Section 106 of the National Historic Preservation Act (NHPA) of 1966. Section 106 of NHPA requires Federal agencies to take into account 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 offer a measure of protection to sites that are 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 established 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 represented 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 Tulare County General Plan of 2012 promotes the preservation of cultural and historic resources through managing and protecting sites of cultural and archeological importance for the benefit of present and future generations (County of Tulare 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 prehistoric, ethnographic, and historic contents 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 410 to 443 feet (125 to 135 meters) in eastern Tulare County, approximately 13.52 miles (21.76 kilometers) southeast of the city of Tulare, California, within the San Joaquin Valley and west edge of the Sierra Nevada Mountains. The San Joaquin Valley is a long, narrow, northwest-trending, alluvial valley that lies between the Sierra Nevada Range to the east and the Coast Ranges to the west (Wagner, 2002).

The Project area is best characterized historically as a rural ranching and agricultural region with large populations of both large and small mammals. Prehistorically, the larger mammals inhabiting

the Project area would have included mule deer (*Odocoileus hemionus californicus*), black-tailed deer (*O. hemionus columbianus*), tule elk (*Cervus elaphus nannoides*), pronghorn antelope (*Antilocarpa Americana*), mountain lion (*Felis concolor*), and black bear (*Ursus americanus*) (Jameson and Peeters 1988). The small mammals that historically inhabited the Project area included rabbit (*Sylvilagus sp.*), black-tailed jackrabbit (*Lepus californicus*), western gray squirrel (*Sciurus griseus*), coyote (*Canis latrans*), and gray fox (*Urocyon cinereoargenteus*).

Soils in the valleys of Tulare County are usually deep to very deep and poorly drained to well-drained. The soils in the APE vary along SR 29. Starting from the northwest end of the Project area, soil complexes in the Project area consist of Tagus, Nord, Exeter, and San Joaquin (Figures 3 and 4).

Tagus consist of poorly very deep, well drained soils formed in alluvium derived from granitic rock sources. This series is typically located terraces and have slopes of 0 to 2 percent. The depth of this series exceeds 60 inches. Nord consists of very deep, well drained soils that formed in mixed alluvium dominantly from granitic and sedimentary rocks. The Nord soils occur on alluvial fans and flood plains and have slopes of 0 to 2 percent. The depth of this series exceeds 60 inches. Exeter consists of moderately deep to a duripan, moderately well drained soils that formed in alluvium mainly from granitic sources. This series is typically located on alluvial fans and stream terraces and have slopes of 0 to 9 percent. The depth of this series exceeds 60 inches. San Joaquin consists of moderately deep to a duripan, well and moderately well drained soils that formed in alluvium derived from mixed but dominantly granitic rock sources. The San Joaquin series is typically located on undulating low terraces with slopes of 0 to 9 percent. The depth of this series exceeds 60 inches (United States Department of Agriculture, 2024).

The average annual precipitation in the San Joaquin Valley is 7 to 20 inches. The mean annual temperature is 61 to 64 degrees F. The frost-free season averages 250 to 300 days.

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 an 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 partly 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 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 B and Phase A. 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 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 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 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 peoples (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 performed the same each year, starting in the spring with the jimsonweed ceremony, followed by 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 first seed and acorn rites and then bear dance (Gayton 1930:379). In each case, shamans served as ceremonial officials responsible for specific dances involving a display of their supernatural powers (Kroeber 1925).

Subsistence practices varied from tribelet to tribelet based on the environment of residence. Throughout Native California, and 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 Porterville 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 Porterville 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. In 1860, Royal Porter Putnam arrived in the village with the intention of establishing a farming operation for cattle, horses, and hogs. He acquired 40 acres of land and constructed a two-story store and a hotel on the elevated area of the marshy terrain, currently located at the intersection of Oak and Main streets. The town was named after the founder, inspired by his first name, as another Putnam family resided to the south of the settlement.

By 1862 the Tule River, which now runs through the southern edge of the city of Porterville, was altered by a year of heavy rainfall. Land that had once been part of the Tule River basin was now dry and the then small town began to expand. Putman's newly drained lands were surveyed and sectioned off into lots. Incoming settlers to the area were given a free lot of land for very one purchased. At the same time streets were being established between the newly created lots, miners moved into the area to extract magnetite ore, and the settlement subsequently grew. With this population increase, the need for increased food production, coupled with the hot arid summers in the region, lead to the establishment of developed irrigation channels.

The town of Porterville was officially incorporated in 1902, and the Chamber of Commerce was formed in 1907, followed by the adoption of a City Manager-Council government in 1926, as well as the adoption of a Charter. The key driver of economic growth in the area has been agriculture, with support from the Central Valley Water Project. Porterville serves as the hub of a significant farming region known for its production of citrus fruit and livestock (City of Porterville 2021).

4.0 ARCHIVAL RECORDS SEARCH

4.1 Southern San Joaquin Valley Information Center (SSJVIC)

The Project area is located in the USGS Porterville 7.5' Series Quadrangle (USGS, 1951). On June 11, 2025, Soar submitted a records search request to the Southern San Joaquin Valley Information Center (SSJVIC) 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 record search received on June 23, 2025, indicate that there are no resources within the Project area. According to the information on file, three (3) cultural resource studies have been conducted within the Project area (Table 1)

Table 1. Survey Reports within the Project area

Report No.	Year	Author / Affiliation	Title
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

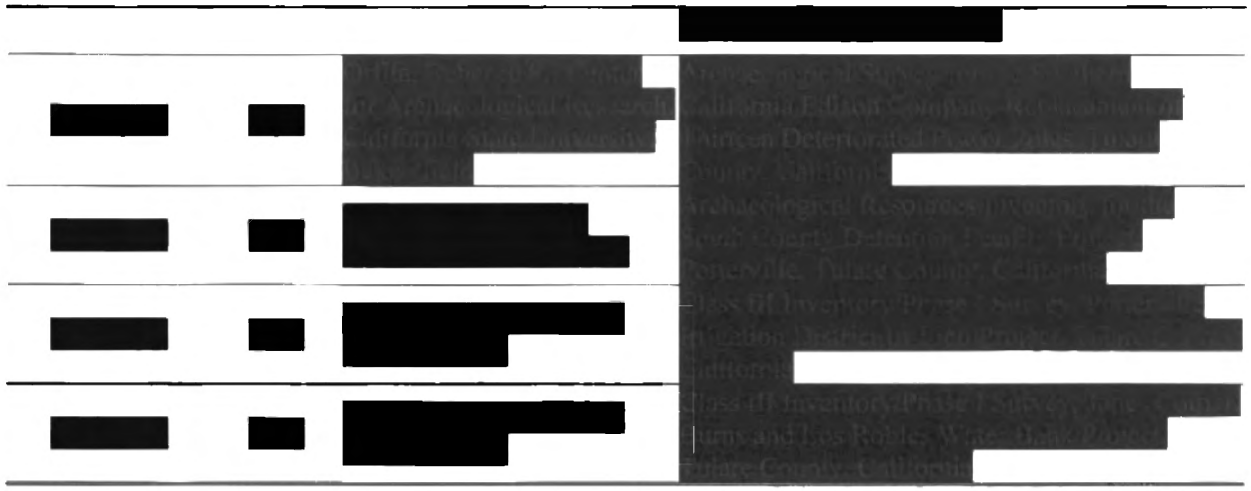
There are three (3) recorded resources within the 0.5-mile record search radius (Table 2). There was seventeen reports identified within a 0.5-mile radius of the Project area (Table 3).

Table 2. Resources within 0.5 Miles of the Project area

Primary #	Type	Description
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

Table 3. Survey Reports within 0.5 Miles of the Project area

Report No.	Year	Author/ Affiliation	Title
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
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[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]



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, the 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 June 11, 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 June 11, 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 four (4) Tulare County Native American groups and individuals affiliated with the local tribes. On July 17, 2025, Ms. Froshour sent letters to all individuals describing the location and the nature of the Project. In each letter, Ms. Froshour included a request for information regarding prehistoric, historic, and ethnographic land use, as well as contemporary Native American values.

On August 5, 2025, Soar received a letter response from Robert Pennell, the Cultural Resources Director of the Table Mountain Rancheria. This response was to inform Soar that the proposed project site is beyond the Table Mountain Rancheria's area of interest.

4.3 HISTORIC AERIAL IMAGE REVIEW

A review of the earliest historic aerial imagery from 1956 reveals that the Project area was primarily agricultural, with a patchwork of canals, unpaved farm access, and paved road rights-of-way. The Project area has grown slowly since 1956, with a gradual increase in residential properties throughout (Nationwide Environmental Title Research, LLC 2020).

5.0 PREVIOUS DISTURBANCES IN THE PROJECT AREA

The project area is located within an area that has undergone heavy anthropogenic modifications, primarily from activities related to agricultural, irrigation, and transportation uses. Likewise, the surface of the Project area has undergone surface grading and intense subsurface disturbance from previous residential and public utility construction. In some cases, the graded surface could exceed 24 inches (60 centimeters).

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

- Surface grading and maintenance of current and historic roads.
- Surface grading and subsurface disturbance for residential construction.
- Surface grading and subsurface disturbance for irrigation construction.
- Subsurface plowing, tilling, and harvesting due to agricultural activities.

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 includes:

- 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, 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 of a California Historical Resources Information System (CHRIS) data request of the Project area and 0.50-mile radius through the Southern San Joaquin Valley Information Center.
- Request of a Native American Heritage Commission (NAHC) Sacred Lands File Search for the Project area and 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 cultural resources including the potential to impact buried cultural resources with no surface expression.
- Intensive Phase 1 pedestrian survey with transect intervals of 5-10 feet (1-3 meters) of the Project area.
- Develop recommendations associated with impacts to cultural resources following the guidelines as outlined in the Regulatory Setting.

Ms. Froshour conducted the field survey of the Project area with the aid of Ms. Federico on July 3, 2025. The Project area was examined by systematic pedestrian inspection of the ground surface. Transect intervals varied from 5-10 feet (1-3 meters). Disturbances immediately adjacent to the Project area were also examined for primary and secondary surface archaeological indicators.

The approximately 5.4 acre Project area consists mostly unpaved farm access roads but will include some areas within existing road rights-of-way (Figures 5-19). The surface visibility of the Project area, defined as the approximate percentage of native soils visible during field survey of a given project component, was estimated at 90-100% within the Project area. The ground surface was covered by patchy non-native grasses with scattered shrubs towards the edges of the Friant-Kern Canal.

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.

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 resources have 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.

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, determination of a resource's eligibility can only be made through extensive research and archaeological testing. Human remains are addressed by State of California Health and Safety Code Section 7050.5. This code section states that no further disturbance shall occur until the Tulare County Coroner has made a determination of the origin and disposition of the remains, pursuant to Public Resources Code Section 5097.98. The Tulare County Coroner must be notified of the find immediately. If the human remains are determined to be prehistoric/ethnohistoric Native American remains, the Tulare County Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendent (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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FIGURES

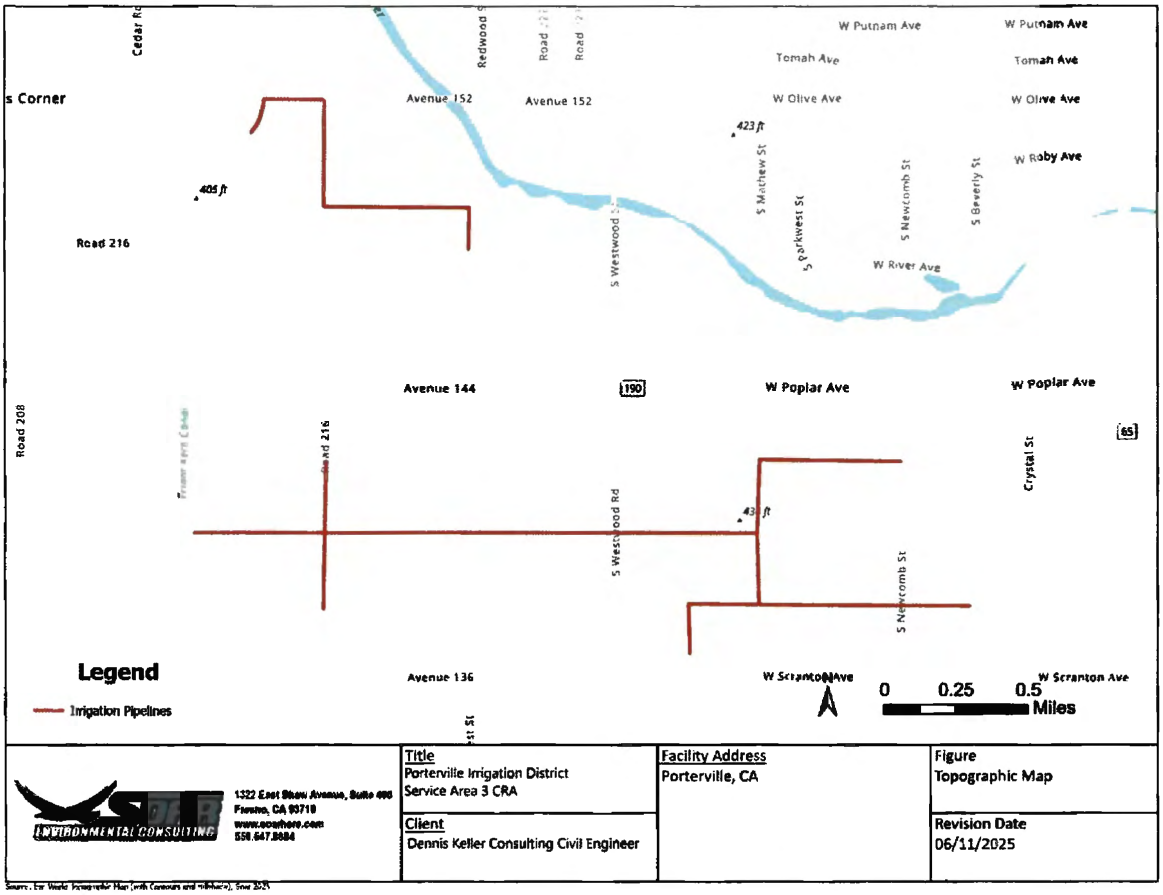


Figure 1— Project Location, adapted from USGS 7.5' series Porterville, California, 2021

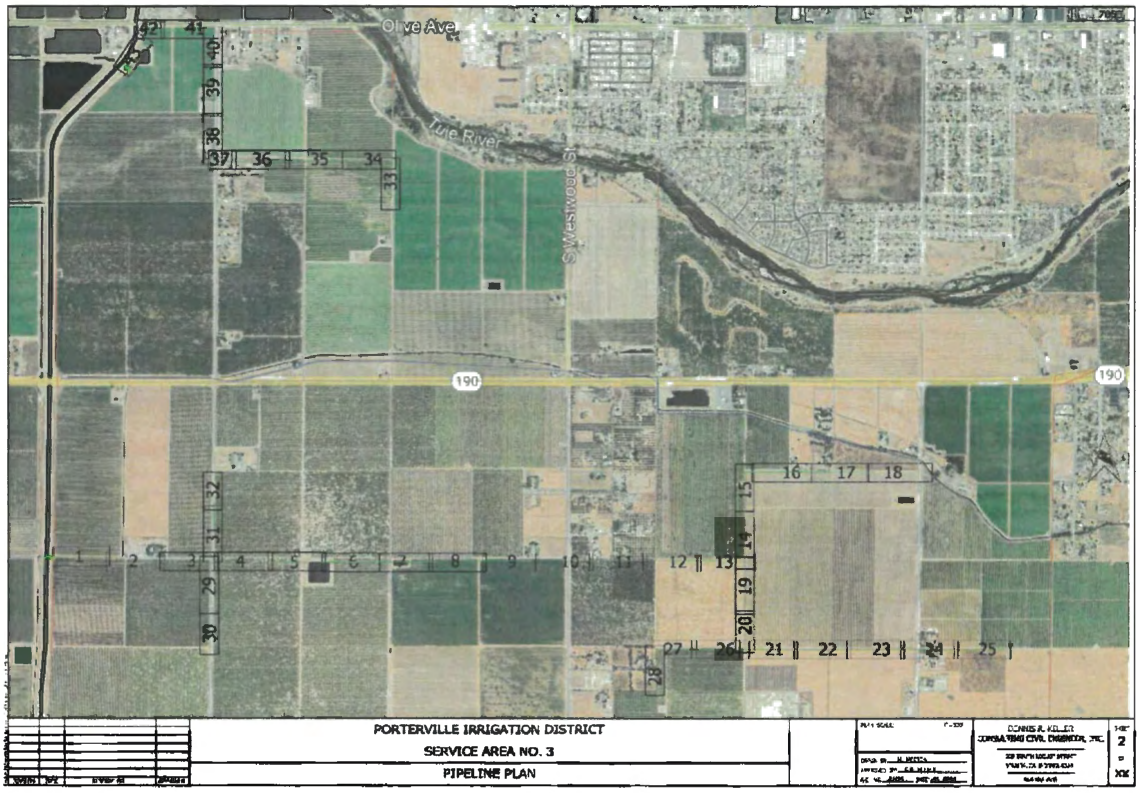
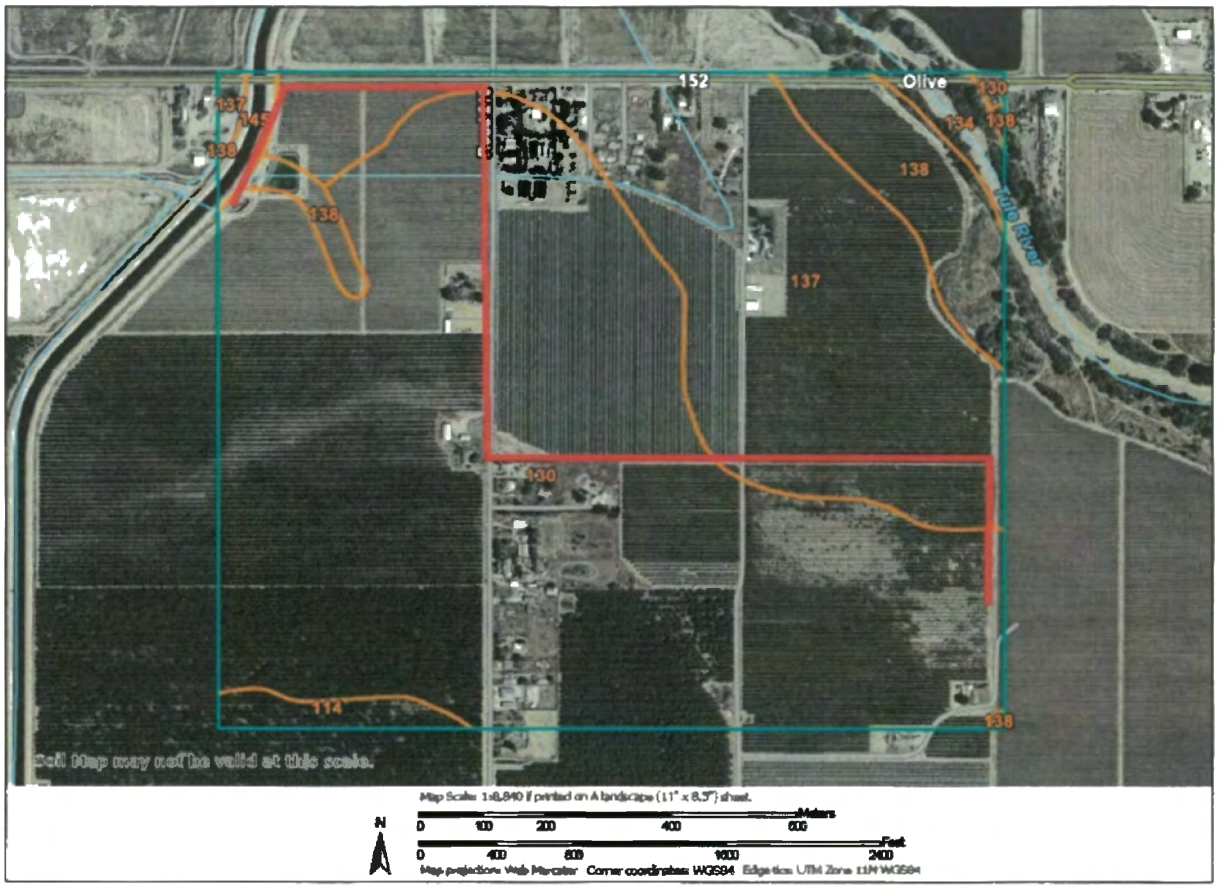


Figure 2— Service Area 3 - Pipeline Plan



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

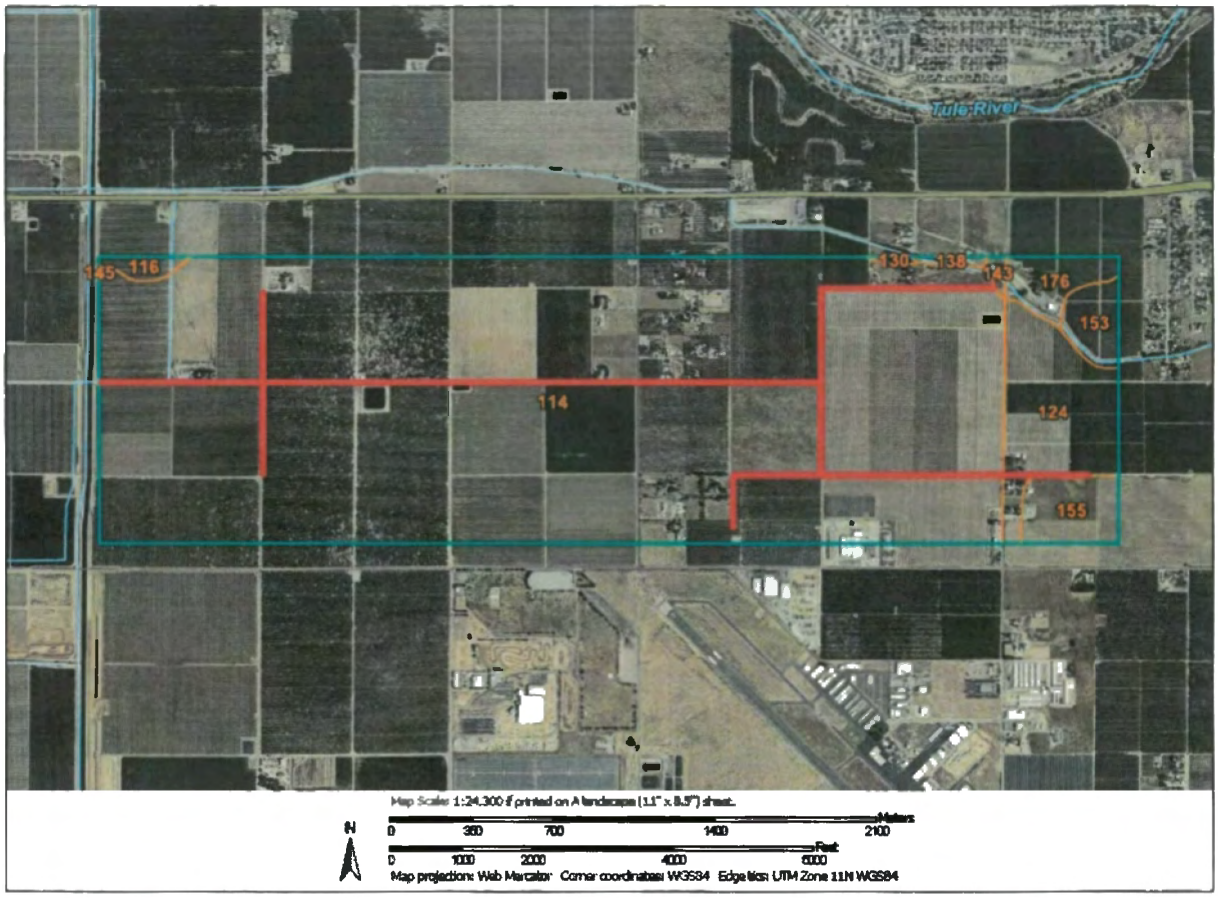
Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Map Unit Symbol	Map Unit Name
114	Exeter loam, 0 to 2 percent slopes
130	Nord fine sandy loam, 0 to 2 percent slopes
134	Riverwash
137	Tagus loam, 0 to 2 percent slopes
138	Tujunga loamy sand, 0 to 2 percent slopes
145	Water-perennial

Figure 3— Soil types occurring in the north section of the Project area



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Map Unit Symbol	Map Unit Name
114, 124	Exeter loam, 0 to 2 percent slopes
116	Flamen loam, 0 to 2 percent slopes
130	Nord fine sandy loam, 0 to 2 percent slopes
153	San Emigdio loam
155	San Joaquin loam, 2 to 9 percent slopes
138	Tujunga loamy sand, 0 to 2 percent slopes
143,176	Yettem sandy loam, 0 to 2 percent slopes
145	Water-perennial

Figure 4— Soil types occurring in the south section of the Project area



Figure 5— Overview from northeast edge of north section, facing northeast



Figure 6— Overview L-shape of north section, facing north



Figure 7— Overview L-shape of north section, facing east



Figure 8— Overview from south edge of north section, facing northwest



Figure 9— Overview from northbound segment of south section, facing north



Figure 10— Overview from eastbound segment of south section, facing east



Figure 11— Overview from southern post point of south section, facing east



Figure 12— Overview from north fork of south section, facing southeast



Figure 13— Overview from center of south section, facing northeast



Figure 14— Overview from center of south section, facing southwest



Figure 15— Overview from T in of south section, facing northwest



Figure 16— Overview from T in of south section, facing northeast



Figure 17— Overview from T in of south section, facing southeast



Figure 18— Overview from T in of south section, facing southwest



Figure 19— Overview from Friant-Kern Canal at west end of south section, facing northeast

APPENDIX A

Southern San Joaquin Valley Information Center Records Search

SOAR ENVIRONMENTAL CONSULTING

Statewide in Sacramento, Pasadena, Bakersfield,
and Corporate Headquarters: 1322 E. Shaw Avenue #400,
Fresno, California 93710

CONFIDENTIAL - REDACTED

APPENDIX B

Sacred Lands File and Native American Contacts List Request

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

Sacred Lands File & Native American Contacts List Request

Wednesday, June 11, 2025

Native American Heritage Commission
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Tel: 916.373.3710
Fax: 916.373.5471
nahc@nahc.ca.gov

RE: Phase I CEQA Cultural Resource Assessment Report for proposed irrigation development southwest of Porterville and east of the Friant-Kern Canal, Porterville, CA 93257.

Dear Sir/Madam,

Please find attached one project location map for the irrigation development southwest of Porterville and east of the Friant-Kern Canal in Porterville, CA 93257, Phase I Cultural Resource Desktop Report, and the Sacred Lands File & Native American Contacts List Request. The proposed project is situated on the Porterville, California (2021), USGS 7.5' Series Quad, T21S, R26E, S31 & 32, and T22S, R27E, S3, 4, 5, & 6. The approximately 5.4 mile project area is located on two locations, the first a canal section at the intersection of Avenue 152 and Road 216 and the second beginning south of Avenue 144, intersecting Roads 216, 224, and 232, and ending due north of West Scranton Avenue. The project is for proposed instillation of pipelines from 8 to 36 inches in diameter, the construction of a new pump station, and the upgrade of an existing pump station. The pipelines will be constructed mostly along unpaved farm access roads but will include some areas within existing road rights-of-way. Work will also be done along the Friant-Kern Canal. It is anticipated that widths up to 45 feet will be required to facilitate construction.

This letter is intended to inform you of the project and to help ensure compliance with the National Environmental Protection Act (NEPA). As part of the Cultural Resources Study for the project, we are requesting your insights on potential Native American cultural properties and resources in and/or near the project.

Please respond at your earliest convenience if you have any information to consider for this study.

Also, we would greatly appreciate if you could review the attached map and indicate to us if there are any concerns you might have or input regarding potentially sensitive cultural heritage values in the project area and vicinity.

Feel free to contact me by email at hfroshour@soarhere.com or phone at 207.232.8912.

Most Sincerely,

Heather Froshour, M.A., R.P.A.
Principal Archaeologist
Soar Environmental Consulting, Inc.
207.232.8912

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: Phase I Porterville Irrigation District Service Area 3 CRA

County: Tulare

USGS Quadrangle Name: Porterville, California (2021)

Township: SEE **Range:** ABOVE **Section(s):**

Company/Firm/Agency: Soar Environmental Consulting Inc.

Street Address: 1322 East Shaw Ave. Suite 400

City: Fresno **Zip:** 93710

Phone: (559)547-8884

Fax:

Email: hfroshour@soarhere.com

Project Description:

The proposed project is situated on the Porterville, California (2021), USGS 7.5' Series Quad, T21S, R26E, S31 & 32, and T22S, R27E, S3, 4, 5, & 6. The approximately 5.4 mile project area is located on two locations, the first a canal section at the intersection of Avenue 152 and Road 216 and the second beginning south of Avenue 144, intersecting Roads 216, 224, and 232, and ending due north of West Scranton Avenue. The project is for proposed instillation of pipelines from 8 to 36 inches in diameter, the construction of a new pump station, and the upgrade of an existing pump station. The pipelines will be constructed mostly along unpaved farm access roads but will include some areas within existing road rights-of-way. Work will also be done along the Friant-Kern Canal. It is anticipated that widths up to 45 feet will be required to facilitate construction.

Local Government Tribal Consultation List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Type of List Requested

■ **CEQA Tribal Consultation List (AB 52)** – ***Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2***

☐ **General Plan (SB 18)** - ***Per Government Code § 65352.3.***

Local Action Type:

☐ **General Plan** ☐ **General Plan Element** ☐ **General Plan Amendment**

☐ **Specific Plan** ☐ **Specific Plan Amendment** ☐ **Pre-planning Outreach Activity**

Required Information

Project Title: Phase I Porterville Irrigation District Service Area 3 CRA

Local Government/Lead Agency: Soar Environmental Consulting Inc.

Contact Person: Heather Froshour

Street Address: 1322 East Shaw Ave. Suite 400

City: Fresno **Zip:** 93710

Phone: (559)547-8884 **Fax:**

Email: hfroshour@soarhere.com

Specific Area Subject to Proposed Action

County: Tulare **City/Community:** Porterville

Project Description:

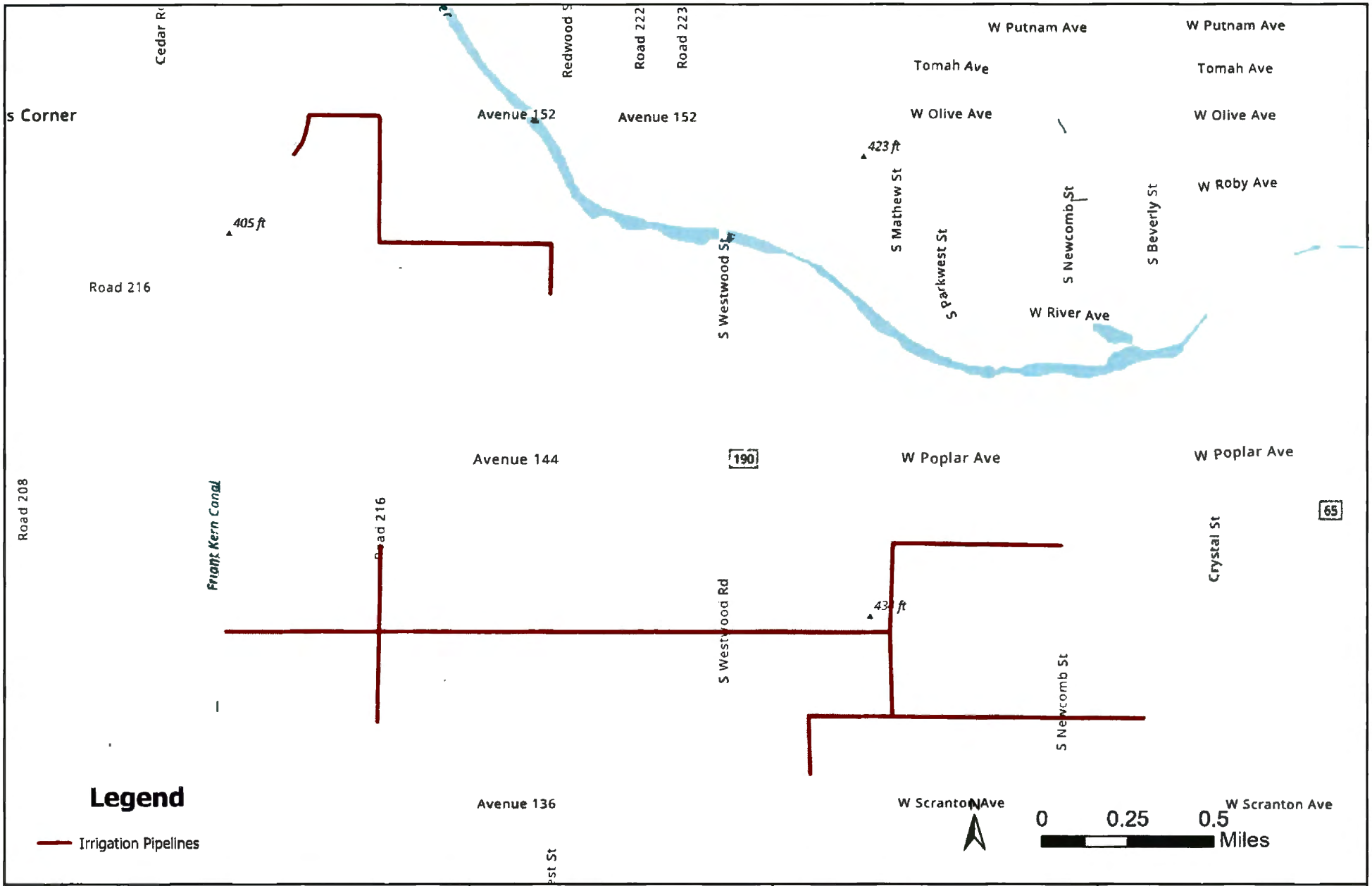
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Additional Request

■ **Sacred Lands File Search** - ***Required Information:***

USGS Quadrangle Name(s): Porterville California (2021) 7.5' Series Quad

Township: SEE **Range:** BELOW **Section(s):** 30



SOAR ENVIRONMENTAL CONSULTING 1322 East Shaw Avenue, Suite 400 Fresno, CA 93710 www.soarhere.com 559.547.8884	Title Porterville Irrigation District Service Area 3 CRA	Facility Address Porterville, CA	Figure Topographic Map
	Client Dennis Keller Consulting Civil Engineer		Revision Date 06/11/2025

Source: Esri World Topographic Map (with Contours and Hillshade); Soar 2025

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
Wayne Nelson
Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Bennae Calac
Pauma-Yuima Band of Luiseño Indians

COMMISSIONER
Vacant

ACTING EXECUTIVE SECRETARY
STEVEN QUINN

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

June 11, 2025

Heather Froshour
Soar Environmental Consulting Inc.

Via Email to: hfroshour@soarhere.com

Re: Native American Tribal Consultation, Pursuant to the Assembly Bill 52 (AB 52), Amendments to the California Environmental Quality Act (CEQA) (Chapter 532, Statutes of 2014), Public Resources Code Sections 5097.94 (m), 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2 and 21084.3, Phase I Porterville Irrigation District Service Area 3 CRA Project, Tulare County

To Whom it May Concern:

Pursuant to Public Resources Code section 21080.3.1 (c), attached is a consultation list of tribes that are traditionally and culturally affiliated with the geographic area of the above-listed project. Please note that the intent of the AB 52 amendments to CEQA is to avoid and/or mitigate impacts to tribal cultural resources, (Pub. Resources Code §21084.3 (a)) ("Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource.")

Public Resources Code sections 21080.3.1 and 21084.3(c) require CEQA lead agencies to consult with California Native American tribes that have requested notice from such agencies of proposed projects in the geographic area that are traditionally and culturally affiliated with the tribes on projects for which a Notice of Preparation or Notice of Negative Declaration or Mitigated Negative Declaration has been filed on or after July 1, 2015. Specifically, Public Resources Code section 21080.3.1 (d) provides:

Within 14 days of determining that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency shall provide formal notification to the designated contact of, or a tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, which shall be accomplished by means of at least one written notification that includes a brief description of the proposed project and its location, the lead agency contact information, and a notification that the California Native American tribe has 30 days to request consultation pursuant to this section.

The AB 52 amendments to CEQA law does not preclude initiating consultation with the tribes that are culturally and traditionally affiliated within your jurisdiction prior to receiving requests for notification of projects in the tribe's areas of traditional and cultural affiliation. The Native American Heritage Commission (NAHC) recommends, but does not require, early consultation as a best practice to ensure that lead agencies receive sufficient information about cultural resources in a project area to avoid damaging effects to tribal cultural resources.

The NAHC also recommends, but does not require that agencies should also include with their notification letters, information regarding any cultural resources assessment that has been completed on the area of potential effect (APE), such as:

1. The results of any record search that may have been conducted at an Information Center of the California Historical Resources Information System (CHRIS), including, but not limited to:

- A listing of any and all known cultural resources that have already been recorded on or adjacent to the APE, such as known archaeological sites;
- Copies of any and all cultural resource records and study reports that may have been provided by the Information Center as part of the records search response;
- Whether the records search indicates a low, moderate, or high probability that unrecorded cultural resources are located in the APE; and
- If a survey is recommended by the Information Center to determine whether previously unrecorded cultural resources are present.

2. The results of any archaeological inventory survey that was conducted, including:

- Any report that may contain site forms, site significance, and suggested mitigation measures.

  All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for public disclosure in accordance with Government Code section 6254.10.

3. The result of the Sacred Lands File (SLF) check conducted through the Native American Heritage Commission was negative.

4. Any ethnographic studies conducted for any area including all or part of the APE; and

5. Any geotechnical reports regarding all or part of the APE.

Lead agencies should be aware that records maintained by the NAHC and CHRIS are not exhaustive and a negative response to these searches does not preclude the existence of a tribal cultural resource. A tribe may be the only source of information regarding the existence of a tribal cultural resource.

This information will aid tribes in determining whether to request formal consultation. In the event that they do, having the information beforehand will help to facilitate the consultation process.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our consultation list remains current.

If you have any questions, please contact me at my email address: melina.carlos@nahc.ca.gov

Sincerely,

Melina Carlos

Melina Carlos
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Tulare County
6/11/2025

County	Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation	Counties	Last Updated
Tulare	Kitanemuk & Yowlumne Tejon Indians	N	Delia Dominguez, Chairperson	115 Radio Street Bakersfield, CA, 93305	(626) 339-6785		2deedominguez@gmail.com	Kitanemuk Southern Valley Yokut	Fresno,Kern,Kings,Los Angeles,Madera,Monterey,San Benito,San Luis Obispo,Tulare	
	Table Mountain Rancheria	F	Michelle Heredia-Cordova, Chairperson	P.O. Box 410 Friant, CA, 93626	(559) 822-2587	(559) 822-2693	mhcordova@tmr.org	Yokut	Fresno,Kern,Kings,Madera,Monterey,San Benito,San Luis Obispo,Tulare	12/21/2023
	Tule River Indian Tribe	F	Neil Peyron, Chairperson	P.O. Box 589 Porterville, CA, 93258	(559) 781-4271	(559) 781-4610	neil.peyron@tulerivertribe-nsn.gov	Yokut	Alameda,Amador,Calaveras,Contra Costa,Fresno,Inyo,Kern,Kings,Madera,Mariposa,Merced,Monterey,Sacramento,San	
	Wuksachi Indian Tribe/Eshom Valley Band	N	Kenneth Woodrow, Chairperson	1179 Rock Haven Ct. Salinas, CA, 93906	(831) 443-9702		kwood8934@aol.com	Foothill Yokut Mono	Alameda,Calaveras,Contra Costa,Fresno,Inyo,Kings,Madera,Marin,Mariposa,Merced,Mono,Monterey,San Benito,San	6/19/2023

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for consultation with Native American tribes under Public Resources Code Sections 21080.3.1 for the proposed Phase I Porterville Irrigation District Service Area 3 CRA Project, Tulare County.

Record: PROJ-2025-003125
Report Type: AB52 CIS
Counties: Tulare
NAHC Group: All

Statewide in Sacramento, Pasadena, Bakersfield,
and Corporate Headquarters: 1322 E. Shaw Avenue #400,
Fresno, California 93710

Tuesday, July 15, 2025

Kitanemuk & Yowlumne Tejon Indians
115 Radio Street
Bakersfield, CA, 93305
Phone: (626) 339-6785
2deedominguez@gmail.com

RE: Porterville Irrigation District CEQA Cultural Resource Assessment for proposed irrigation development southwest of Porterville and east of the Friant-Kern Canal, Porterville, CA 93257.

Dear Delia Dominguez, Chairperson,

Below, please find a description of the proposed project, a map showing the project location, and the name of our project point of contact, pursuant to Public Resources Code (PRC) § 21080.3.1 (d).

The proposed project is situated on the Porterville, California (2021), USGS 7.5' Series Quad, T21S, R26E, S31 & 31, and T22S, R27E, S3, 4, 5, & 6. The approximately 5.4 mile project area is located on two locations, the first a canal section at the intersection of Avenue 152 and Road 216 and the second beginning south of Avenue 144, intersecting Roads 216, 224, and 232, and ending due north of West Scranton Avenue. The project is for proposed instillation of pipelines from 8 to 36 inches in diameter, the construction of a new pump station, and the upgrade of an existing pump station. The pipelines will be constructed mostly along unpaved farm access roads but will include some areas within existing road rights-of-way. No modifications to the Friant-Kern Canal are required. It is anticipated that widths up to 45 feet will be required to facilitate construction.

The Porterville Irrigation District has requested a Phase 1 Archaeological Resource Assessment (Phase 1) to determine the potential for cultural resources prior to development, pursuant to state and local laws, including the California Environmental Quality Act (CEQA) and Tulare County guidelines. Soar Environmental Consulting Inc. (Soar Environmental) proposes to complete the Phase 1 study for the present project.

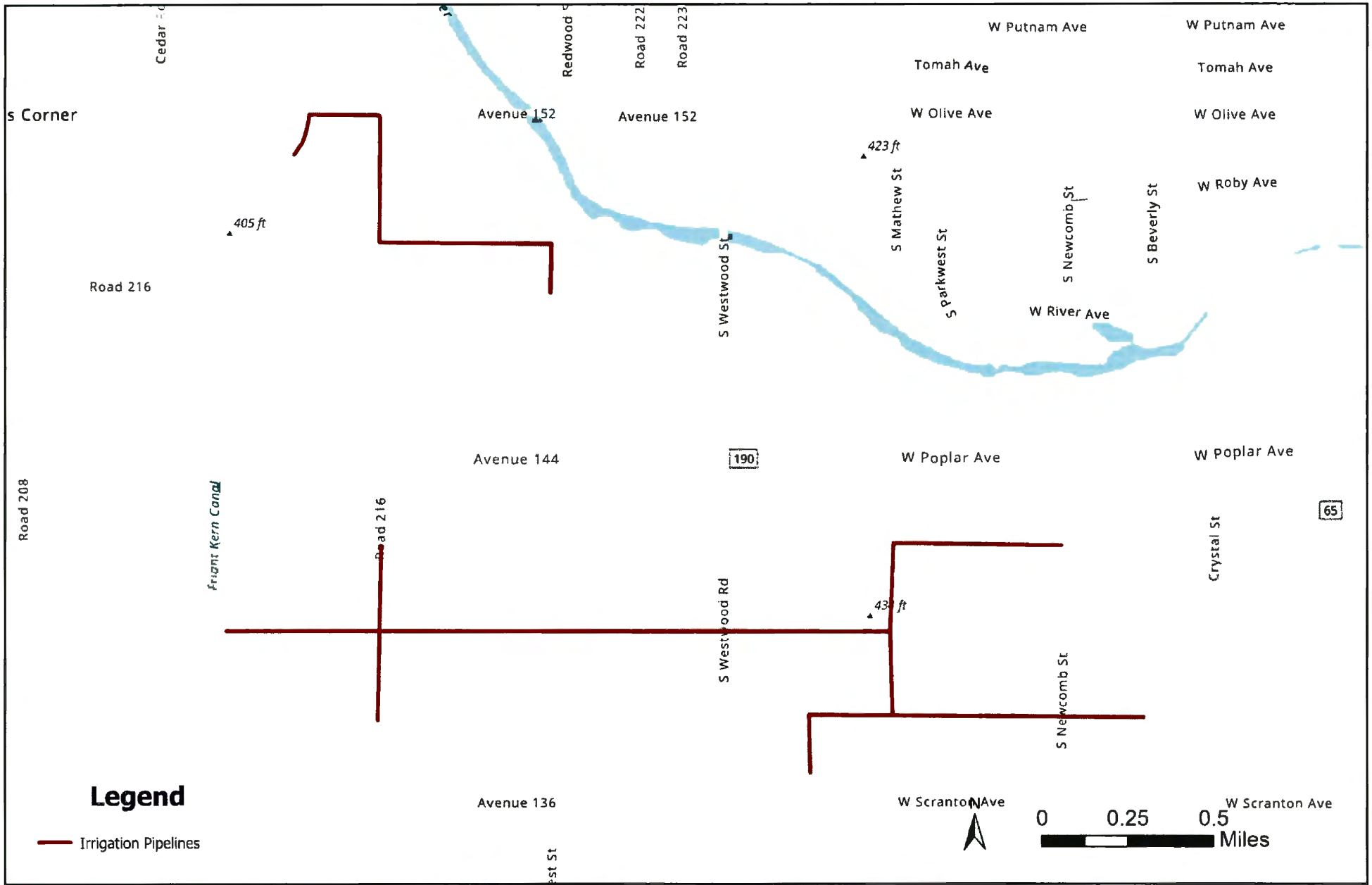
An important element of a Phase 1 study is to identify sites, resources, or locations of cultural importance to the local Native American community. As part of the process, Soar Environmental contacted the Native American Heritage Commission (NAHC) on June 11, 2025. On June 11, 2025, Soar received a response letter from the NAHC indicating **negative results** of the Sacred Lands File search. Furthermore, the NAHC identified your organization as a point of contact regarding potentially known recorded sites or cultural resources within Tulare County.

Soar contacted the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System on June 11, 2025. On June 23, 2025, SSJVIC results reported no historic cultural resources within the project area. No archaeological sites are known within the project area. Three (3) previous surveys have been conducted within the project area. Three (3) historic cultural resources were identified within the ½-mile search radius of the project area. No historic properties on federal, state, or local inventories have been evaluated within the project area. Seventeen (17) previous surveys have been conducted within a ½-mile radius of the project area. On July 3, 2025, Soar conducted an archeological pedestrian field survey of the project area. **No cultural resources** were identified during the field survey.

Soar is contacting you to determine if you have any concerns regarding the proposed development. Pursuant to PRC § 21080.3.1 (d), you have **30 days** from the receipt of this letter to request consultation, in writing, with Soar. Should you have any concerns or knowledge of cultural resources in the specific project area, please contact me at hfroshour@soarhere.com or at (207) 232-8912 at your earliest convenience. If Soar does not hear from you within this time, we shall assume that you have no comments regarding this project.

Respectfully,

Heather Froshour, M.A., R.P.A.
Principal Archaeologist
Soar Environmental Consulting, Inc.



SOAR ENVIRONMENTAL CONSULTING 1322 East Shaw Avenue, Suite 400 Fresno, CA 93710 www.soarhere.com 559.547.8884	Title Porterville Irrigation District Service Area 3 CRA	Facility Address Porterville, CA	Figure Topographic Map
	Client Dennis Keller Consulting Civil Engineer		Revision Date 06/11/2025

Source: Esri World Topographic Map (with Contours and Hillshade); Soar 2025

Statewide in Sacramento, Pasadena, Bakersfield,
and Corporate Headquarters: 1322 E. Shaw Avenue #400,
Fresno, California 93710

Tuesday, July 15, 2025

Table Mountain Rancheria
P.O. Box 410
Friant, CA, 93626
Phone: (559) 822-2587
mhcordova@tmr.org

RE: Porterville Irrigation District CEQA Cultural Resource Assessment for proposed irrigation development southwest of Porterville and east of the Friant-Kern Canal, Porterville, CA 93257.

Dear Michelle Heredia-Cordova, Chairperson,

Below, please find a description of the proposed project, a map showing the project location, and the name of our project point of contact, pursuant to Public Resources Code (PRC) § 21080.3.1 (d).

The proposed project is situated on the Porterville, California (2021), USGS 7.5' Series Quad, T21S, R26E, S31 & 31, and T22S, R27E, S3, 4, 5, & 6. The approximately 5.4 mile project area is located on two locations, the first a canal section at the intersection of Avenue 152 and Road 216 and the second beginning south of Avenue 144, intersecting Roads 216, 224, and 232, and ending due north of West Scranton Avenue. The project is for proposed instillation of pipelines from 8 to 36 inches in diameter, the construction of a new pump station, and the upgrade of an existing pump station. The pipelines will be constructed mostly along unpaved farm access roads but will include some areas within existing road rights-of-way. No modifications to the Friant-Kern Canal are required. It is anticipated that widths up to 45 feet will be required to facilitate construction.

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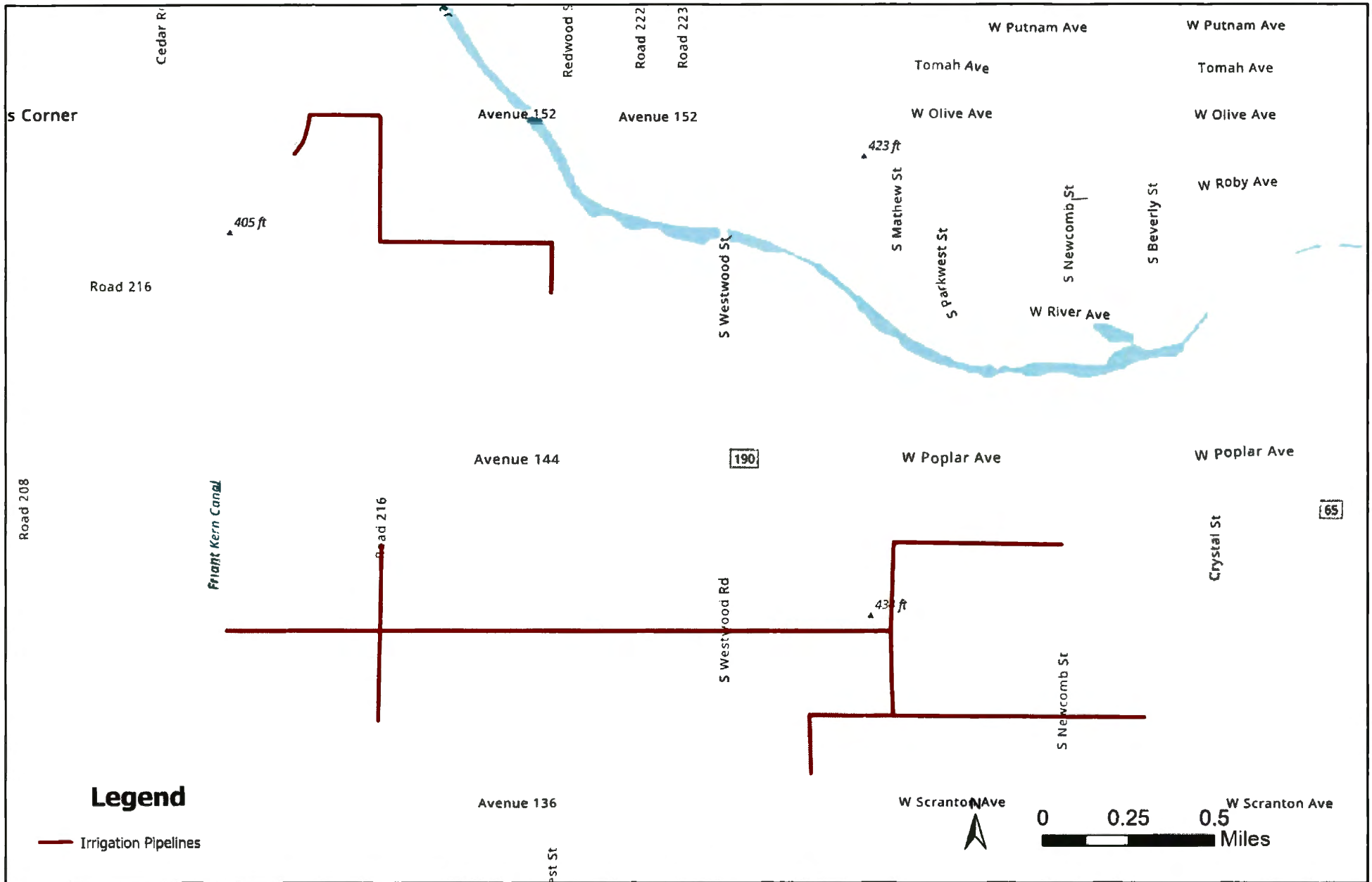
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Statewide in Sacramento, Pasadena, Bakersfield,
and Corporate Headquarters: 1322 E. Shaw Avenue #400,
Fresno, California 93710

Tuesday, July 15, 2025

Tule River Indian Tribe
P.O. Box 589
Porterville, CA, 93258
Phone: (559) 781-4271
neil.peyron@tulerivertribe-nsn.gov

RE: Porterville Irrigation District CEQA Cultural Resource Assessment for proposed irrigation development southwest of Porterville and east of the Friant-Kern Canal, Porterville, CA 93257.

Dear Neil Peyron, Chairperson,

Below, please find a description of the proposed project, a map showing the project location, and the name of our project point of contact, pursuant to Public Resources Code (PRC) § 21080.3.1 (d).

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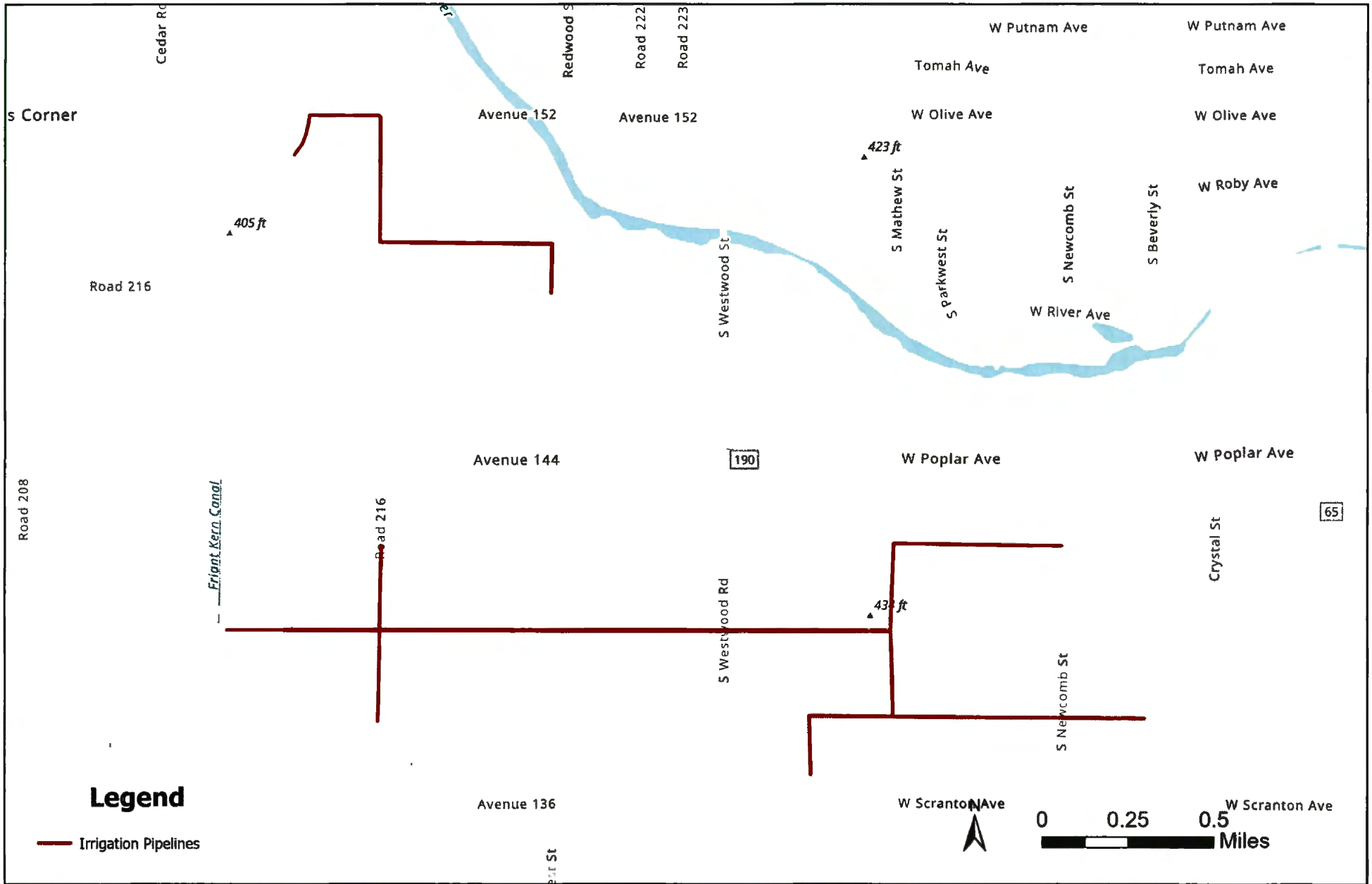
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SOAR ENVIRONMENTAL CONSULTING
1322 East Shaw Avenue, Suite 400
Fresno, CA 93710
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559.547.8884

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Statewide in Sacramento, Pasadena, Bakersfield,
and Corporate Headquarters: 1322 E. Shaw Avenue #400,
Fresno, California 93710

Tuesday, July 15, 2025

Wuksachi Indian Tribe/Eshom Valley Band
1179 Rock Haven Ct.
Salinas, CA, 93906
Phone: (831) 443-9702
kwood8934@aol.com

RE: Porterville Irrigation District CEQA Cultural Resource Assessment for proposed irrigation development southwest of Porterville and east of the Friant-Kern Canal, Porterville, CA 93257.

Dear Kenneth Woodrow, Chairperson,

Below, please find a description of the proposed project, a map showing the project location, and the name of our project point of contact, pursuant to Public Resources Code (PRC) § 21080.3.1 (d).

The proposed project is situated on the Porterville, California (2021), USGS 7.5' Series Quad, T21S, R26E, S31 & 31, and T22S, R27E, S3, 4, 5, & 6. The approximately 5.4 mile project area is located on two locations, the first a canal section at the intersection of Avenue 152 and Road 216 and the second beginning south of Avenue 144, intersecting Roads 216, 224, and 232, and ending due north of West Scranton Avenue. The project is for proposed instillation of pipelines from 8 to 36 inches in diameter, the construction of a new pump station, and the upgrade of an existing pump station. The pipelines will be constructed mostly along unpaved farm access roads but will include some areas within existing road rights-of-way. No modifications to the Friant-Kern Canal are required. It is anticipated that widths up to 45 feet will be required to facilitate construction.

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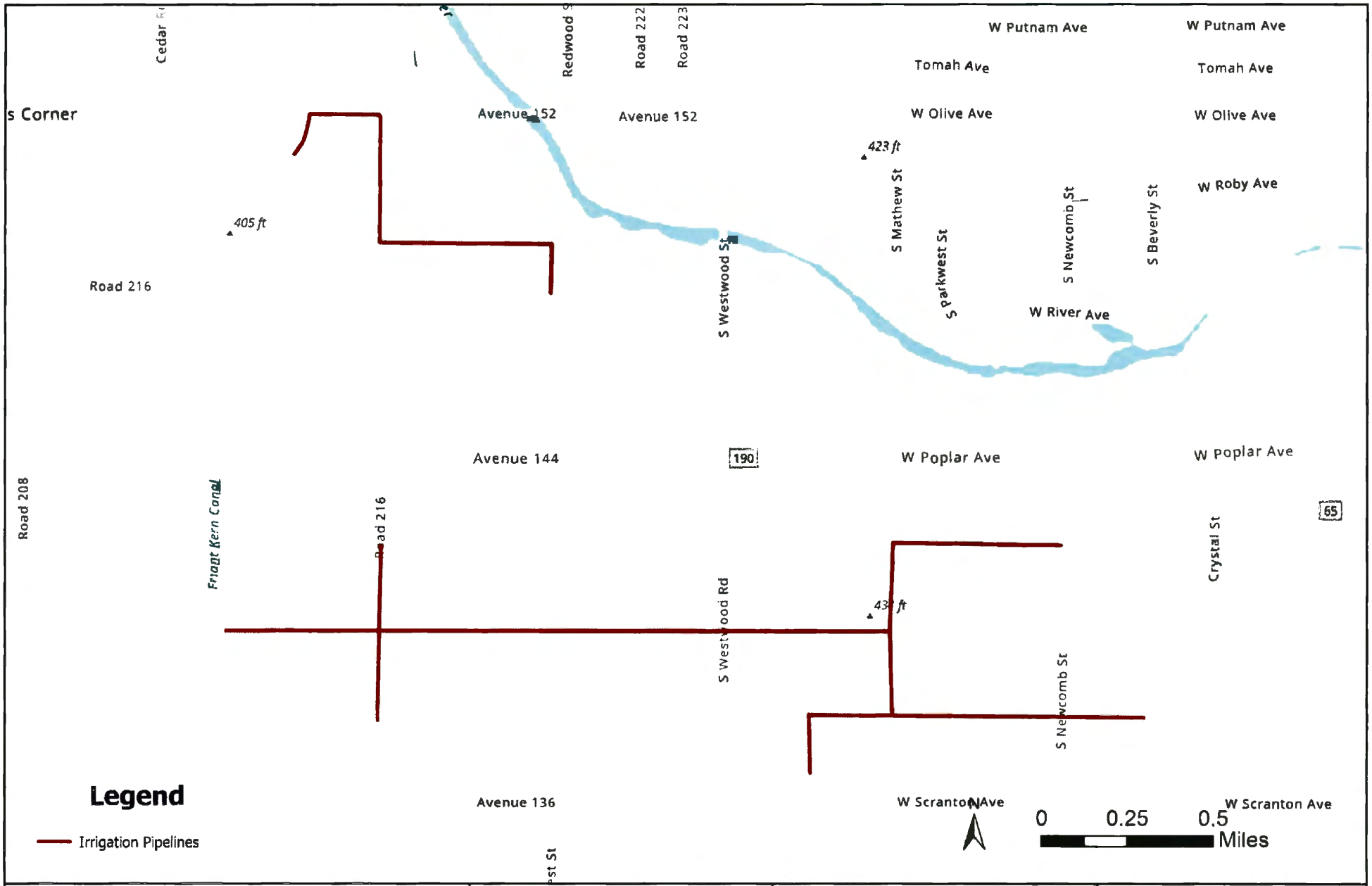
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Heather Froshour, M.A., R.P.A.
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Source: Esri World Topographic Map (with Contours and Hillshade); Soar 2025

9589 0710 5270 3017 6433 42

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Postage $1.63

Total Postage and Fees $6.93

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City, State, ZIP+4® Friant CA 93626

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Porterville, CA 93258

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- Return Receipt (electronic) $ $0.00
- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $1.63

Total Postage and Fees $6.93

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JUL 15 2025
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Sent To Neil Peyron
Street and Apt. No., or PO Box No. P.O. Box 589
City, State, ZIP+4® Porterville CA 93258

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instructions

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For delivery information, visit our website at www.usps.com®.

Bakersfield, CA 93305

OFFICIAL USE

Certified Mail Fee $5.30
Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $
- Return Receipt (electronic) $ $0.00
- Certified Mail Restricted Delivery $ $0.00
- Adult Signature Required $ $0.00
- Adult Signature Restricted Delivery $

Postage $1.63

Total Postage and Fees $6.93

0612

CLOVIS CA 93612
Postmark Here
JUL 15 2025
07/15/2025 USPS

Sent To Delia Dominguez
Street and Apt. No., or PO Box No. 115 Radio Street
City, State, ZIP+4® Bakersfield, CA 93305

PS Form 3800, January 2023 PSN 7530-02-000-9047 See Reverse for Instruction

TABLE MOUNTAIN RANCHERIA
TRIBAL GOVERNMENT OFFICE

July 22, 2025

Heather Froshour, M.A., R.P.A.
Sr. Archaeologist
Soar Environmental Consulting, Inc.
1322 E. Shaw Avenue #400
Fresno, CA 93710

RE: Irrigations development project proposing installation of pipelines, construction of a new pump station, and upgrading an existing pump station near the Friant-Kern Canal in Porterville, California

To: Heather Froshour,

This is in response to your letter dated July 15, 2025, regarding Irrigations development project proposing the installation of pipelines, construction of a new pump station, and upgrading an existing pump station near the Friant-Kern Canal in Porterville, California.

We appreciate receiving notice; however, this project site is beyond our area of interest.

Sincerely,

Robert Pennell
Cultural Resources Director

Michelle Heredia-Cordova
Tribal Chairperson

Richard L. Jones
Tribal Vice-Chairperson

Jenna Gosselaar
Tribal Secretary/Treasurer

Samantha Toles-Rodriguez
Tribal Council Member-At-Large

Mark Martinez
Tribal Council Member-At-Large

23736
Sky Harbour Road
Post Office
Box 410
Friant
California
93626
(559) 822-2587
Fax
(559) 822-2693

APPENDIX C

Staff Resumes



Heather Froshour

Senior Archaeologist

12 Years of Relevant Experience

Biography

Ms. Froshour's background emphasises archaeology, anthropology, and cultural resources monitoring.

Education

- M.A. in Historical Archaeology, November 2014. University of Leicester, Leicester, UK.
- B.A. in Anthropology/Geography, June 2010. University of Southern Maine, Gorham/Portland, ME.

Professional Development

- 8 hr training in Firest Aid
- Adult, Child, Infant CPR & First Aid Training
- Driver/Operator

Professional Affiliations

- Register of Professional Archaeologists
- CHRIS Qualified Archaeologist
- BLM Permitted Archaeologist
- Society of American Archaeology – SAA
- Society of Historical Archaeology – SHA
- Society of California Archaeology – SCA

Technical Expertise

- Lithic Analysis
- Technical Report Writing
- Lab analysis
- Cultural Monitoring
- Site Surveying – Phases 1-3
- Excavation
- Metal Detection
- Auguring
- Research
- MS Office and Excel
- Collector and Survey 123 for ArchGIS

Practical Experience

Ms. Froshour is a registered professional archaeologist and cultural resources specialist with extensive experience in field and technical work. This experience including cultural resources monitoring, site survey, phase 1-3 excavations, and anthropology on various projects throughout the United States. She has a combined 8 years of experience in academic, consulting, museum, and public archaeology, and has worked in CRM since 2013 throughout various regions of the United States. Primary states of focus have included Maine, Massachusetts, Louisiana, Georgia, Virginia, Arizona, and California. She routinely assesses cultural resources for project related effects and their significance, provides cultural resource mitigation services, directs archaeological surveys of both excavation and pedestrian methods, and prepares documents for Section 106 of the NHPA, CEQA, and NRHP. Ms. Froshour also has experience working alongside trial monitors through survey within the Colorado River and Mendocino National Forest regions. She has worked alongside the USDA Forest Service to provide post-fire monitoring and mitigation recommendations.

Ms. Froshour is certified by the Register for Professional Archeologists (Registrant ID: 5457).

Highlighted Projects

California High-Speed Rail Authority Construction Package 1, Fresno and Madera Counties, Cultural Resources Support, March 2023-Present
Heather is the Cultural Resources Support for this construction package. As such, she oversees staff archaeologist cultural reporting, monitoring, and artifact processing on the 33-mile right of way between Madera and Fresno.

SOAR Environmental Consulting, Senior Archaeologist, January 2023-Present
Senior Archaeologist, Phase I Cultural Resources Assessments, CDFW, Various California Locations in Butte, Lassen, Orange, Plumas, Sacramento, San Diego, and Sierra Counties, California
Provided desktop research, supervised site pedestrian surveys, co-wrote full Phase 1 reports, and tribal consultation for 8 separate mitigation management projects throughout California.

Senior Archaeologist, Phase I Cultural Resources Assessment, Ivanhoe, Tulare County, California
Provided desktop research, supervised site pedestrian survey, full Phase 1 report, and tribal consultation for well replacement project.

Senior Archaeologist, Phase I Cultural Resources Assessment, Terra Bella, Tulare County, California
Provided desktop research, supervised site pedestrian survey, full Phase 1 report, and tribal consultation for aggregate quarry construction project.

Senior Archaeologist, Phase I Cultural Resources Assessment, Dixon, Solano County, California
Provided desktop research, site pedestrian survey, cultural resources portion of full Environmental Assessment, and tribal consultation for ranch subdivision.

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Senior Archaeologist, Phase I Cultural Resources Assessment, Lone Pine, Inyo and Mono Counties, California
Provided desktop research, site pedestrian survey, full Phase 1 report/ cultural resources section of full Initial Study report, and tribal consultation for broadband fiber optic project.

Senior Archaeologist, Phase I Cultural Resources Assessment, Lindsay, Tulare County, California
Provided desktop research, supervised the 2-person crew site pedestrian survey, full Phase 1 report, and tribal consultation for highline pipeline replacement project.

Senior Archaeologist, Phase I Cultural Resources Assessment/Evaluation, Farmersville, Tulare County, California
Provided desktop research, supervised the 2-person crew site pedestrian survey, full Phase 1 report, and tribal consultation, Cultural Resources Initial Study/Environmental Assessment for roundabout and road extension construction project.

Senior Archaeologist, Phase I Cultural Resources Assessment, Wildomar, Riverside County, California
Provided desktop research, site pedestrian survey, full Phase 1 report, and tribal consultation for two small retail construction projects.

Senior Archaeologist, Phase I Cultural Resources Assessment, Visalia, Tulare County, California
Provided desktop research, supervised the 2-person crew site pedestrian survey, full Phase 1 report, and tribal consultation, Cultural Resources Initial Study for two rezoning and housing subdivision construction projects.

Senior Archaeologist, Phase I Cultural Resources Evaluation, Yokuts Valley, Fresno County, California
Provided desktop research, tribal consultation, and full Phase 1 report for the construction a new saber transmission tower to accompany existing USACE and CAL FIRE structures on a 100 square feet area on top of Bear Mountain.

Senior Archaeologist, Phase I Cultural Resources Evaluation, Shirley Meadows, Kern County, California
Provided desktop research, tribal consultation, and full Phase 1 report with DPR forms for the construction a new saber transmission tower, and concrete masonry shelter enclosed in an 8 foot tall wire fence on a 100 square feet area on top of Shirley Peak.

Senior Archaeologist, Phase I Cultural Resources Evaluation, Mountain Ranch, Calaveras County, California
Provided desktop research, tribal consultation, and full Phase 1 report with DPR forms for the construction a new saber transmission tower, and propane tank enclosed in an 8 foot tall wire fence on a 100 square feet area on top of Quiggs Mountain.

Senior Archaeologist, Phase I Cultural Resources Assessment, Glennville, Kern County, California
Provided desktop research, site pedestrian survey, tribal consultation, and full Phase 1 report for the construction a new saber transmission tower, CMU block shelter, and parking lot enclosed in a wire fence on a 100 square feet area on top of Mount Pheasant.

Senior Archaeologist, Phase I Cultural Resources Assessment, Bakersfield, Kern County, California
Provided desktop research, site pedestrian survey, and full Phase 1 report for rezoning project and multiple family residence construction project located in downtown Bakersfield.

Senior Archaeologist, Phase I Cultural Resources Assessment, Fresno, Fresno County, California
Provided desktop research, site pedestrian survey, and full Phase 1 Historic Resources Identification Report for mobile home park wastewater collection and disposal project located in downtown Fresno.

Senior Archaeologist, Phase I Cultural Resources Assessment, Joshua Tree, California
Provided desktop research, site pedestrian survey, and full Phase 1 report for upscale yurt campground construction project located in San Bernadino County.

Post Fire Fuels and Priority Heritage Asset Assessment Surveys, Grindstone Region, Tehama & Glenn Counties, CA (June 2022-December 2022). The Great Basin Institute, Archaeological Crew Lead.
Phase I pedestrian surveys and site recording on post-wildfire burned landscapes within the Mendocino National Forest. Overseeing a small crew in the field survey, site recording, and completion of extensive USDA Forest Service site reports and mapping of cultural resources in the area. Ensured that all pertinent data is documented and reported to Forest Services standards with specific attention to current field conditions, disturbances, vegetation, terrain, and geospatial data of cultural resources. Provided day to day support of the crew and worked as a liaison between the Great Basin Institute and Mendocino National Forest personnel. Conducted Section 106 and Section 110 Priority Heritage Asset assessments of archaeological resources throughout the eastern region of the Mendocino. Assisted in final Phase 1 survey report writing.

2021-2022
Various Cultural Resource Management Survey Projects, GA & NC (June 2021- April 2022). TerraXplorations, Inc., Archaeology Field Director.
Phase I shovel testing in various locations throughout Georgia, in addition to a single project just outside of Raleigh, NC. These projects include road, bridge, and culvert improvement surveys as well as solar tract, farm, and generator surveys. All projects were conducted in 30m intervals along transect within the ESB of the survey area. All positive shovel tests were then delineated in 15m interval cruciform to determine site boundaries. Several projects required the use of metal detection grids in order to thoroughly survey areas of known Civil War activity. A number of projects for the Georgia Department of Transportation also required the probing of areas within the project ESB that were located within 1km from a known cemetery, with potential anomalies delineated and all results fully recorded. Duties include overseeing and directing field crews in locating, collecting, recording, and interpreting data from the survey. The supervision of personnel, including aiding in hiring and firing, performance reviews, training, work allocation, and problem resolution. Ensuring safe work practices and directing morning safety meetings to address potential hazards and safety concerns in the areas scheduled for fieldwork that day. Participation in field and office meetings with PIs and company owners to address scheduling and management procedures based on client needs as well as those of state and federal regulations and requirements.

Cultural Resource Management Survey Project, VAM-1 and Glasgow Pipeline Replacement, VA (May 2021-June 2021). TerraXplorations, Inc., Archaeology Crew Chief.

Phase I shovel test excavations from the replacement of the VAM-1 and Glasgow natural gas pipelines in the Blue Ridge Mountains, near the Appalachian Trail. Evaluated and conducted field work in various conditions in primarily mountainous terrain. Under direct supervision helped to manage and organize field crew in order to complete the project in a timely and efficient manner. Maintained field equipment and assisted in the writing and compilation of all field paperwork. Personally in charge of the majority of all mappings of and oversight of field crew for sites throughout the project area.

Various Cultural Resource Management Survey Projects, LA & MS (August 2020-May 2021). TerraXplorations, Inc., Archaeology Field Technician.

Phase I shovel test excavations for bank mitigation in Northeastern Mississippi along the Buttahatchee River. Phase III survey of two projects; the historic St. Amelia Plantation in Welcome, Louisiana and an unnamed prehistoric village in Plaquemine, Louisiana. The phase III projects both required excavating the foundations of various structures, and in the case of the prehistoric site excavating and mapping postholes within pits. The projects also required drawing plan views, and stratigraphic profiles, as well as feature and level write-ups. Unit excavations included 1mx1m to 3mx3m units, with a few requiring the extension of existing units to chase out observed features and artifact clusters.

Various Cultural Resource Management Survey Projects, ID & WI (June 2020 -July 2020). Tetra Tech, Inc., Archaeology Field Technician.

Phase I pedestrian surveying of various wind and solar farm projects throughout corn and soybean fields.

Cultural Resource Management Survey, Acadiana to Gillis, LA (January 2020-March 2020). BGE, Inc., Archaeology Field Technician.

Phase I shovel test excavations of proposed natural gas pipeline between Acadian and Gillis, Louisiana. This project entailed the excavation of 30mx30m units with distance varying based on HPA and LPA guidelines (a spacing of 30m to 50m respectively). A requirement of the survey was to maintain daily investigation point forms for individual shovel test units. In addition to this, it was required to aid in recording artifacts and photos of sites found throughout the project.

Various Cultural Resource Management Survey Projects, MN & IA (November 2019-December 2019). In Situ Archeological Consulting LLC, Archaeology Field Technician.

Phase I pedestrian surveying of various natural gas and cellular tower projects, as well as Phase II field work entailing the excavation of 45cmX45cm test units and GPS data collection. The projects also occasionally required the writing of site forms, and research for future projects at the Minnesota SHPO collections.

Cultural Resource Management Survey, Ten West Link Project, CA & AZ (August 2019-October 2019). POWER Engineers Inc., Archaeology Field Technician.

Phase I pedestrian survey of the proposed 500 kV transmission line connecting electrical substations in Tonopah, Arizona and Blythe, California. This project entailed working in one of five teams, and often included 1-2 tribal monitors from the Colorado River Indian Tribes. The right of way crews used a 400ft buffer for the corridor, with each team using a 15m spread to survey the proposed transmission line. This survey required the use of a Trimble GPS system to navigate the corridor and plot both isolate and site locations for GIS and recording crew use. As part of the recording crew later in the survey, it was also required to conduct thorough site

analysis and recordation via site forms and Trimble points of each observed artifact and feature, both historic and prehistoric.

Authored Publications

2024 Froshour, Heather. "Phase I Cultural Resources Assessment: Well No. 6 Replacement Project, Ivanhoe, California."

2024 Froshour, Heather, and Jamie Neitenbach. "Phase I Cultural Resources Assessment: Terra Bella Aggregate Quarry Construction Project, Terra Bella, California."

2024 Froshour, Heather. "Phase I Cultural Resources Assessment: Realized Dreams Ranch Subdivision Project, Dixon, California."

2024 Froshour, Heather, and Rowland, Kevin. "Phase I Cultural Resources Assessment: Lindsay-Strathmore Irrigation District Highline Pipeline Replacement Project, Lindsay, California."

2024 Froshour, Heather, and Rowland, Kevin. "Phase I Cultural Resources Assessment/ Evaluation: Rd 168 & E Walnut Ave Roundabout Project, Farmersville, California."

2024 Froshour, Heather, and Rowland, Kevin. "Phase I Cultural Resources Assessment: Cameron Ranch Housing Subdivision Project, Visalia, California."

2024 Froshour, Heather. "Phase I Cultural Resources Assessment Cake House Cannabis Small Retail Centers, Wildomar, California."

2024 Froshour, Heather. "Phase I Cultural Resources Assessment: Lagomarsinio Housing Subdivision Project, Tulare, California."

2024 Froshour, Heather. "Phase I Cultural Resources Assessment: Elliot Housing Subdivision Project, Visalia, California."

2023 Froshour, Heather. "Phase I Cultural Resources Evaluation: 30811 Bear Mountain Rd., Yokuts Valley, California."

2023 Froshour, Heather. "Phase I Cultural Resources Evaluation: Shirley Peak, Rd. 622, Kern County, California."

2023 Froshour, Heather. "Phase I Cultural Resources Evaluation: Sierra Vista Lookout., Quiggs Mountain, Mountain Ranch, California."

2023 Froshour, Heather. "Phase I Cultural Resources Evaluation: Granite Rd., Mount Pheasant, Glennville, California."

2023 Froshour, Heather. "Phase I Cultural Resources Assessment: 4415 Wilson Rd., Bakersfield, California."

2023 Froshour, Heather. "Cultural Resources Desktop Assessment: 1941 N. Golden State Blvd., Fresno, California."

2023 Froshour, Heather. "Phase I Cultural Resources Assessment: 3174 Bonair Ave., Joshua Tree, California."

2023 Froshour, Heather. "Cultural Resources Desktop Assessment: 3200 Rio Linda Blvd., Sacramento, California."

2023 Hawley, Maria and Froshour, Heather. "Cultural Resources Assessment, 18644 16th Ave., Stratford, California."

2022 Lashway, Nick, Hovis, Chad, and Froshour, Heather. "Upper Thomes Forestwide Fuels Phase I Report: U.S.D.A. Forest Service Mendocino National Forest Covelo and Grindstone Ranger Districts, California."

Academic Publications

2024 Harvey, Amanda R., Atherton, Heather, MacKinnon, Amy, Rushing, Brett, Zimmer, Paul, Froshour, Heather D., & Kubal, Kathleen. "Over a Decade of Design-Build Archaeology on the California High-Speed Rail, Construction Package 1 from Madera to Fresno, California."

2013 Hamilton, Nathan D. and Froshour, Heather D (presenter). "Explore 5,000 Years of History in Danvers, Massachusetts."

2013 Froshour, Heather D. "Preserving the Past: Public and Historical Archaeology at the Rebecca Nurse Homestead, Danvers, Massachusetts."

2012 Froshour, Heather D (presenter). "17th-18th Century Occupations in Danvers, Massachusetts."



Julie Federico

Archaeologist

Biography

Julie's background emphasises historical and physical anthropology

Education

- M.A. Interdisciplinary Subjects-Oregon State University, Oregon-2004
- B.A. Anthropology (Archaeology)-University of California, Berkley, California-2000

Professional Development

- Driver/Operator

Technical Expertise

- Report writing
- Lab analysis
- Archival Research
- Excavation
- Archaeological survey
- Construction monitoring
- Artifact analysis
- Data collection

Practical Experience

Julie Federico is a passionate Archeologist with over 10 years of experience in both Historical and Physical Archaeology. Julie's impressive research and data collection skills have helped her aid in the Historic Preservation of the City of Fresno.

Highlighted Projects

CITY OF FRESNO HISTORIC PRESERVATION COMMISSION—FRESNO, CA 2022-PRESENT

- One of seven Commissioners serving the City of Fresno, appointed by Mayor Jerry Dyer.
- Considerations of properties already on one of the Registers (Local, State, and Federal) and voting in new ones.
- Visiting homes, buildings, and sites for compliance with the Mills Act for keeping up repairs and preservation.

PROJECT ARCHAEOLOGIST, ECORP CONSULTING, INC.--2004-2005

- Conducted Archaeological Survey.
- Monitored construction activity.
- Determined eligibility for National and Local Registers of Historic Places.
- Clerical and fieldwork.
- Effectively ensured that complacency was within regulations

FIELD AND LABORATORY TECHNICIAN—2001, APPLIED EARTHWORKS, INC.

- Excavated on a Victorian-era neighborhood in Sacramento, CA
- In-field lab techniques on excavated material.

MUSEUM PREPARATOR 1998-1999 AND 1996-1997, UC BERKELEY MUSEUM OF PALEONTOLOGY

- Part-time employment for UC Berkeley Museum of Paleontology, preparing fossils and acquiring new inventory.
- Prepared teaching collections for Professors to teach the Integrative Biology Department classes.

1322 E. Shaw Avenue, Suite 400, Fresno, CA 93710
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APPENDIX E

FLOOD HAZARD MAPS

SOUTHEAST SERVICE AREA (SERVICE AREA 3)
LATERAL PIPELINE PROJECT

PORTERVILLE IRRIGATION DISTRICT

NOTES TO USERS

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

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

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

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

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 11. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

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

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

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

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

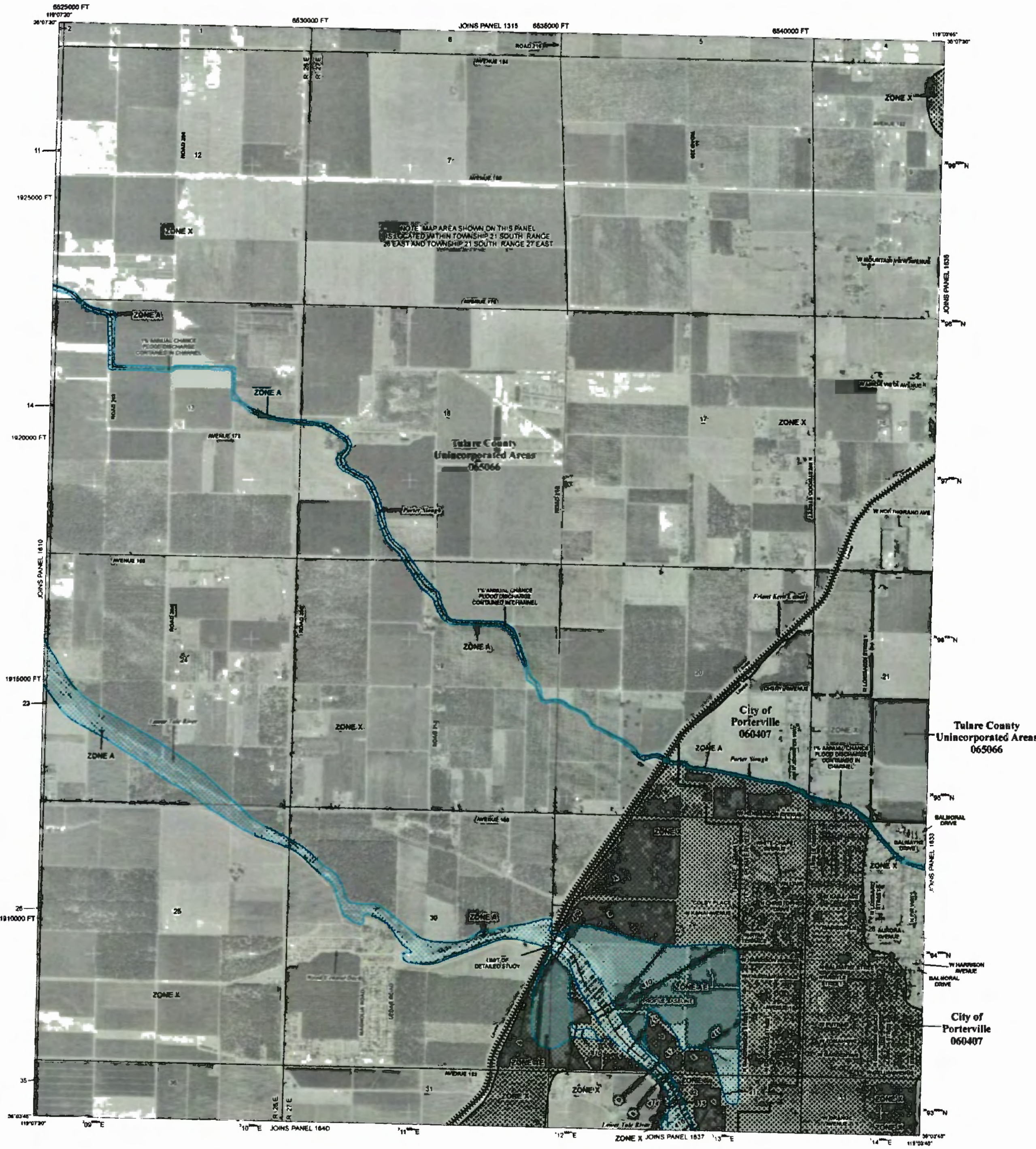
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

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

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

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

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



LEGEND

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

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface 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 Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

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

OTHER FLOOD AREAS

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

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 Zones and boundary dividing Special Flood Hazard Areas of different Base 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; elevation 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 American Datum of 1983 (NAD 83), Western Hemisphere
76N	1000-meter Universal Transverse Mercator grid values, zone 11
600000 FT	5000-foot grid ticks: California State Plane coordinate system, zone IV (FIPSZONE 0404), Lambert Conformal Conic projection
DX5510 x	Bench mark (see explanation in Notes to Users section of this 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 Community 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 Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

NFIP — NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1630E

FIRM
FLOOD INSURANCE RATE MAP

TULARE COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 1630 OF 2550
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

COMMUNITY	NUMBER	PANEL	SUFFIX
PORTERVILLE, CITY OF	060407	1630	E
TULARE COUNTY	065066	1630	E

MAP NUMBER
06107C1630E

EFFECTIVE DATE
JUNE 16, 2009

Federal Emergency Management Agency

NOTES TO USERS

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

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

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nformation Services
, NNGS12
tional Geodetic Survey
X 9, 09202
East-West Highway
Spring, Maryland 20910-3282
713-3242

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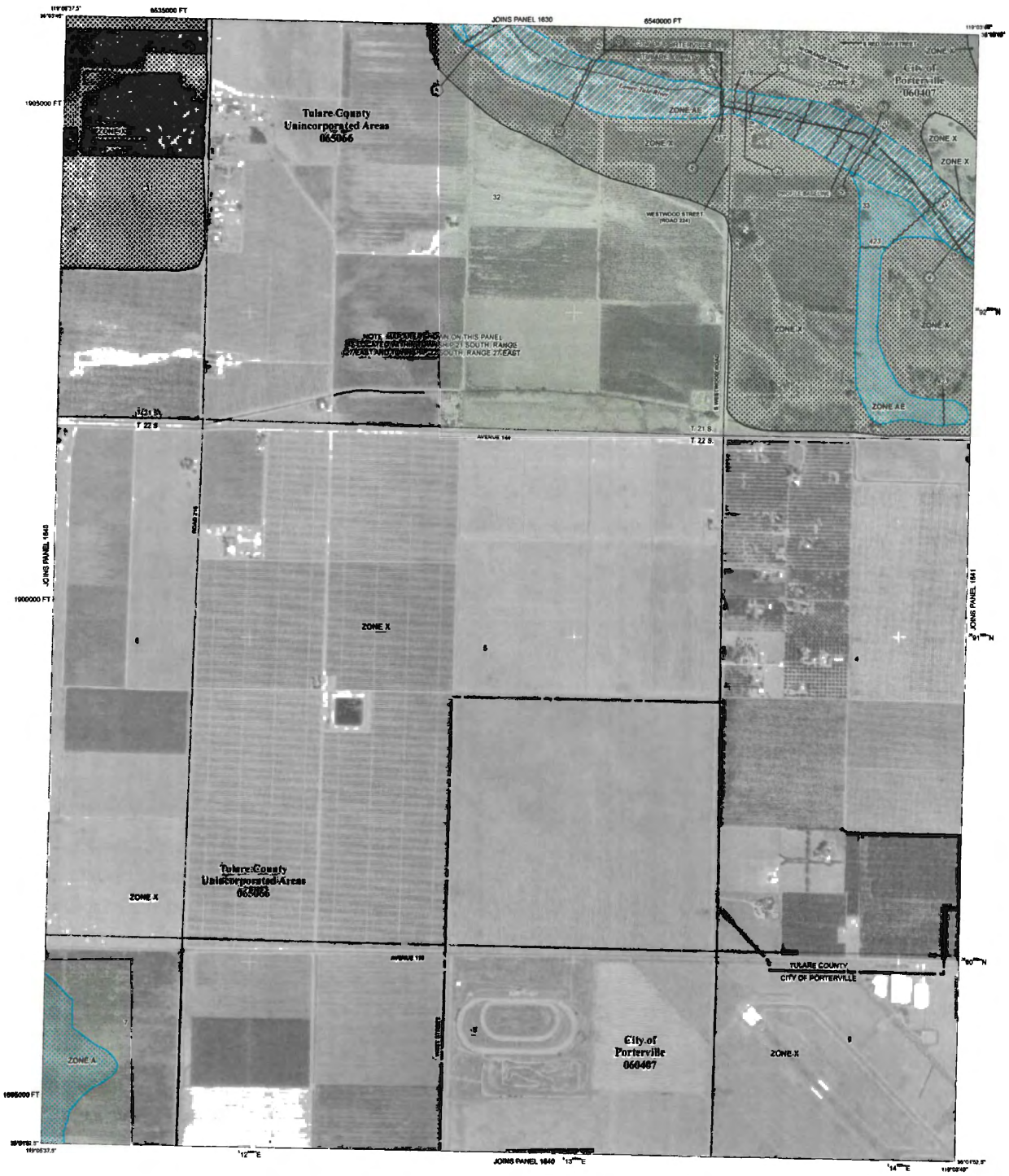
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ct the FEMA Map Service Center at 1-800-358-9616 for information on ble products associated with this FIRM. Available products may include ently issued Letters of Map Change, a Flood Insurance Study report, and/or versions of this map. The FEMA Map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

have questions about this map or questions concerning the National Flood ance 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 INUNDAT BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance 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 in Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water 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); av depths determined. For areas of alluvial fan flooding, velocities determined.
ZONE AR — Special Flood Hazard Area formerly protected from the 1% annual ch flood by a flood control system that was subsequently decertified. Zo indicates that the former flood control system is being restored to pr 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 Elev 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 or encroachments so that the 1% annual chance flood can be carried without substantial incr in flood heights.

OTHER FLOOD AREAS

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

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 generally 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 Zones; boundary dividing Special Flood Hazard Areas of different 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; ele in feet*

* Referenced to the North American Vertical Datum of 1988

Cross section line
Transect line
87°07'45", 32°22'30" — Geographic coordinates referenced to the North Americ Datum of 1983 (NAD 83), Western Hemisphere
3759000 mN — 1000-meter Universal Transverse Mercator grid values, zone 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 t FIRM panel)
• 551.5 — 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 Community 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 insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'
250 0 500 1000 FEET
100 0 100 200 METERS

PANEL 1637E

FIRM

FLOOD INSURANCE RATE

TULARE COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1637 OF 2550

(SEE MAP INDEX FOR FIRM PANEL LAY

CONTAINS

COMMUNITY	NUMBER	PANEL
PORTERVILLE, CITY OF	060407	1637
TULARE COUNTY	065066	1637

Notice to User: The Map Number shown below s used when placing map orders; the Community shown above should be used on insurance applicatio subject community

MAP NUM
06107C1

EFFECTIVE
JUNE 16,

Federal Emergency Management A

NOTES TO USERS

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nformation Services
, NNGS12
al Geodetic Survey
-3, #8202
East-West Highway
Spring, Maryland 20910-3282
713-3242

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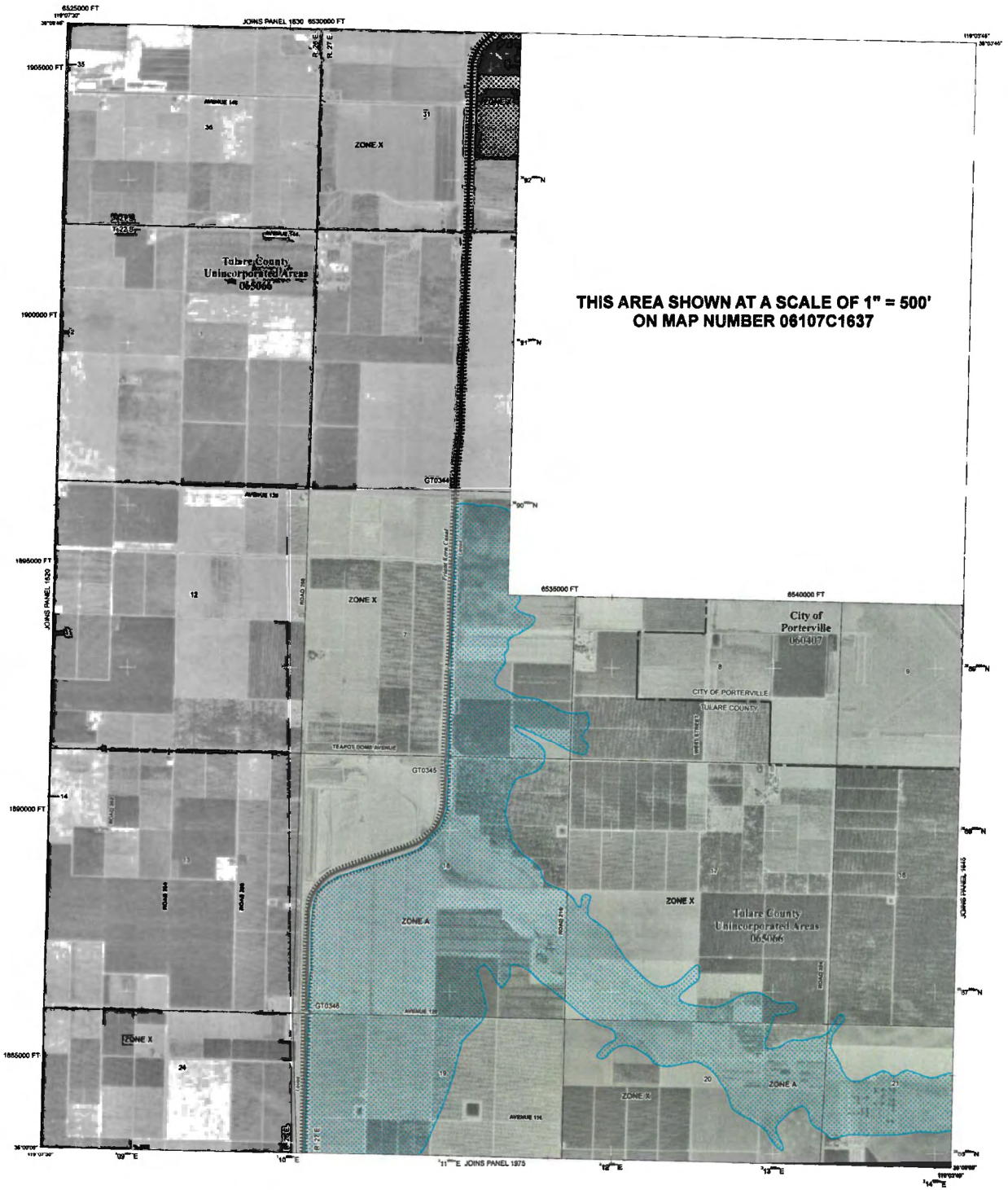
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LEGEND

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- elevation of the 1% annual chance flood.

ZONE A — No Base Flood Elevations determined.

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ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); Base Elevations determined.

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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 floo average depths of less than 1 foot or with drainage areas less 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 Zones 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; ele in feet*

* Referenced to the North American Vertical Datum of 1988

- A — A — Cross section line
- B — B — Transect line
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North Amer Datum of 1983 (NAD 83), Western Hemisphere
- 4276000 FT — 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 X — 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 Communi 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'

PANEL 1640E

FIRM
FLOOD INSURANCE RATE

TULARE COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 1640 OF 2550

SEE MAP INDEX FOR FIRM PANEL LAYO

CONTAINS

COMMUNITY	NUMBER	PANEL
PORTERVILLE, CITY OF	060407	1640
TULARE COUNTY	065066	1640

Notice to User: The Map Number shown below s use when placing map orders; the Community shown above should be used on insurance applicat requested.

MAP NUM
06107C1

EFFECTIVE D
JUNE 16,

Federal Emergency Management Ag

NOTES TO USERS

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LEGEND

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

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- ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); av depths determined. For areas of alluvial fan flooding, velocities determined.
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- ZONE A99 — Area to be protected from 1% annual chance flood by a Federal protection system under construction; no Base Flood Eleva 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 incr in flood heights.

OTHER FLOOD AREAS

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

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 Zones / boundary dividing Special Flood Hazard Areas of different 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; ele in feet*

* Referenced to the North American Vertical Datum of 1988

- Cross section line
- Transect line
- 87°07'45", 32°22'30" — Geographic coordinates referenced to the North Americ Datum of 1983 (NAD 83), Western Hemisphere
- 3776000mN — 1000-meter Universal Transverse Mercator grid values, zone 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 t 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, 2008

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" = 600'
200 0 200 400 FEET
100 0 100 200 METERS

PANEL 1641E

FIRM

FLOOD INSURANCE RATE

TULARE COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1641 OF 2550

(SEE MAP INDEX FOR FIRM PANEL LAY

CONTAINS

COMMUNITY	NUMBER	PANEL
PORTERVILLE, CITY OF	060407	1641
TULARE COUNTY	065066	1641

Notice to User: The Map Number shown below s used when placing map orders; the Community shown above should be used on insurance applicatio subject community

MAP NUI
06107C1

EFFECTIVE
JUNE 16,

Federal Emergency Management A

National Flood Hazard Layer FIRMette

FEMA



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.

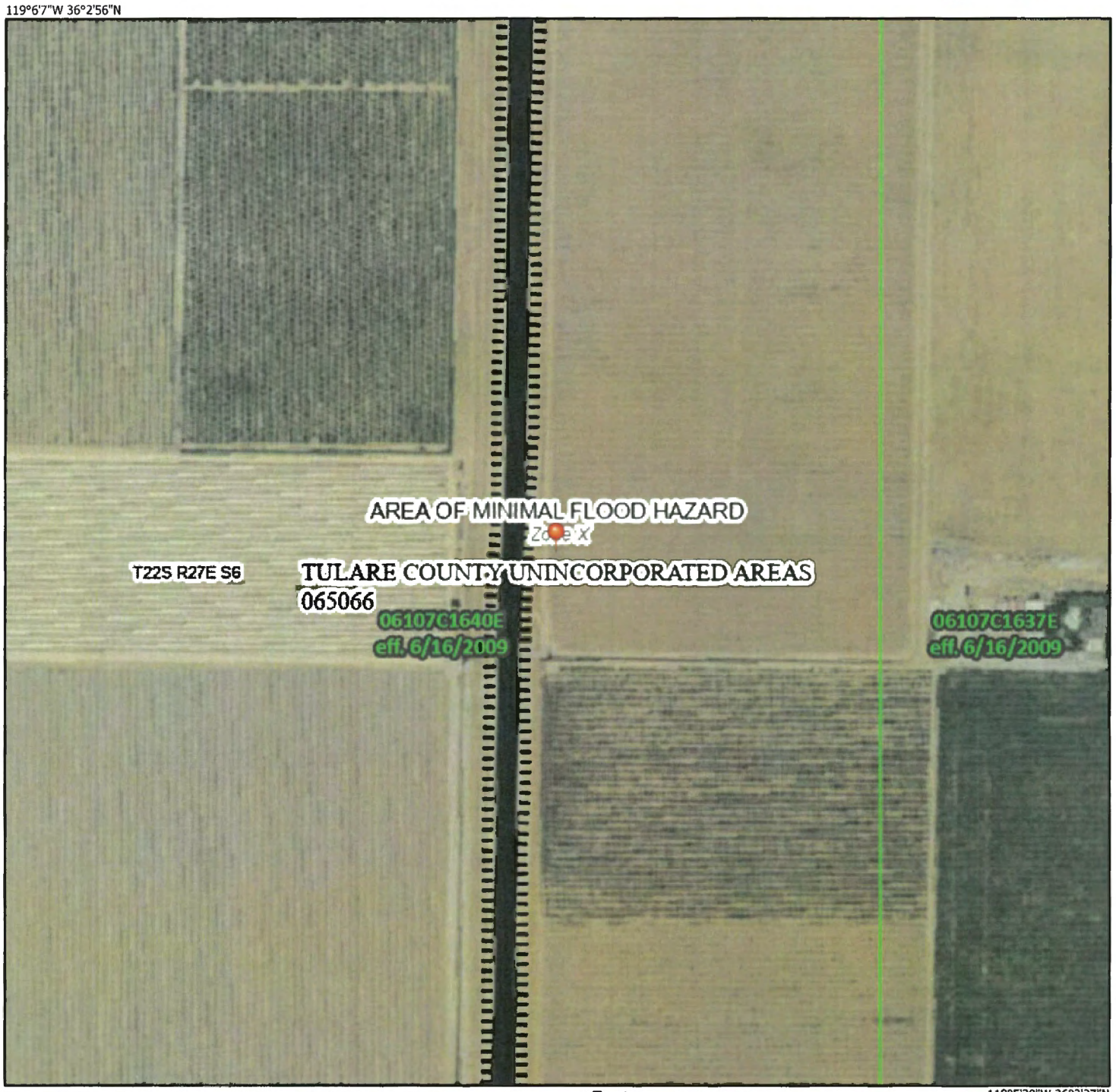
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/6/2025 at 10:16 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.

National Flood Hazard Layer FIRMette

FEMA



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*
- 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

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National Flood Hazard Layer FIRMette



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
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- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone*

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- 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.

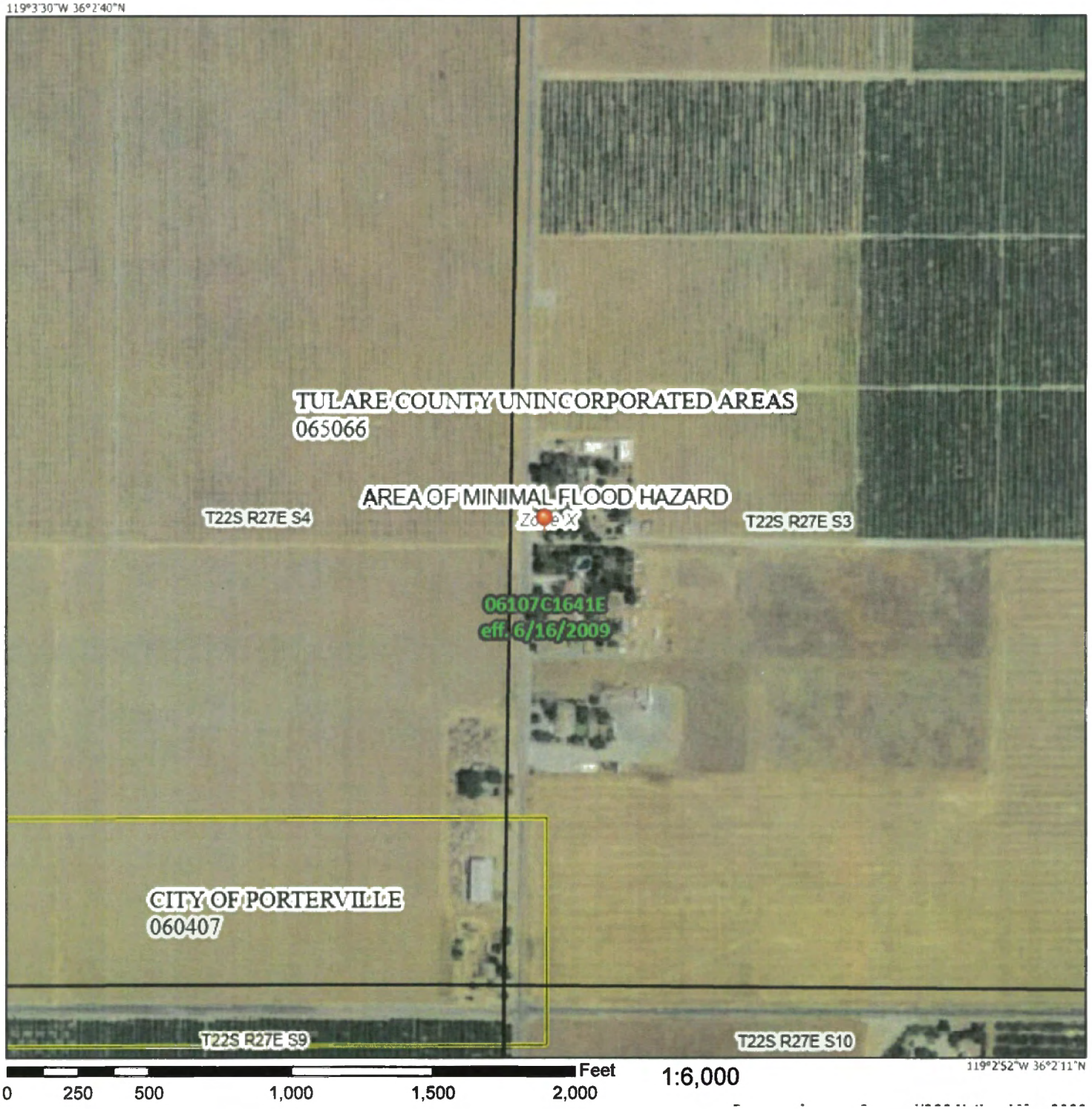
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National Flood Hazard Layer FIRMette

FEMA



Legend

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GENERAL STRUCTURES
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OTHER FEATURES
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- 17.5 Water Surface Elevation
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- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

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

N

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