

KETTLEMAN CITY COMMUNITY SERVICES DISTRICT

NEW GROUNDWATER WELL PROJECT

CEQA INITIAL STUDY & ENVIRONMENTAL CHECKLIST

DRAFT

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APPENDICES

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1 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

- | | |
|--|---|
| 1. Project Title: | Kettleman City Community Services District Groundwater Well Project |
| 2. Lead Agency Name and Address: | Kettleman City Community Service District; 110 General Petroleum Ave., Kettleman City, CA 93239 |
| 3. Contact Person and Phone Number: | Brian Skaggs, Project Engineer; 559-582-9237 |
| 4. Project Location: | 51 Fourth Street, Kettleman City, CA 93239 |
| 5. Project Sponsor's Name and Address: | Kettleman City Community Services District |
| 6. General Plan Designation: | Public Facilities |
| 7. Zoning: | PF |

8. Description of Project:

Kettleman City Community Services District (KCCSD or District) plans to install a new groundwater well within the existing surface water treatment plant. The proposed well will have a depth of approximately 800 feet and a capacity of 900 gallons per minute (gpm). A new well manifold and pipeline will be installed. The well will be used as a supplementary water supply to the existing water treatment plant during periods when there is insufficient surface water available to meet demands.

Construction activities will include:

- Drill test hole
- Drill bore hole & install casing
- Install well pump and motor
- Install well manifold and connection pipeline

Construction is expected to take approximately 4 weeks.

9. Surrounding Land Uses and Setting:

The Proposed Project is located in western Kings County near Kettleman City. The Proposed well and connection pipeline will be completely within the fenced Surface Water Treatment Plant facility and all land within the immediate vicinity of the project site is developed to the treatment plant. The ground surface within the fenced area is either paved with asphalt or graveled. The land outside the fence is undeveloped and barren. The California Aqueduct is southwest of the Proposed Project site and the Kettleman City is to the northeast.

10. Other public agencies whose approval is required: (e.g., permits, financing approval, or participation agreement)

The California Department of Water Resources is a responsible agency for CEQA and is providing funding assistance for the project.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

Yes. See Section 1.18

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. Where checked below, the topic with a potentially significant impact will be addressed in an environmental impact report.

- | | | |
|--|---|---|
| ☐ Aesthetics | ☐ Agriculture and Forest Resources | ☐ 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 | ☐ Tribal Cultural Resources |
| ☐ Utilities / Service Systems | ☐ Wildfire | ☐ Mandatory Findings of Significance |
| | ☒ None | ☐ None with Mitigation Incorporated |

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

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

Signature

Date

Printed Name

Title

Agency

1.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics.				
Except as provided in Public Resources Code section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) 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?	☐	☐	☐	☒

1.1.1 Environmental Setting

The Proposed project is located within the existing Surface Water Treatment Plant fenced area and the land immediately surrounding the Proposed Project is graded and covered in gravel. The Surface Water Treatment Plant Site is an industrial site and is not part of a scenic vista or view. The proposed well and manifold are consistent with other components of the Surface Water Treatment Plant and will generally blend in with that facility.

1.1.2 Discussion

a) Have a substantial adverse effect on a scenic vista?

There is no scenic vista or view in the vicinity of the project and thus no vista to effect. The proposed well and connection pipeline will be within the fenced area of the water treatment plant and will be indistinguishable from the components of that system.

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

The Proposed Project will be constructed within a developed industrial facility and there are no scenic resources to affect.

- c) **In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?**

The Proposed Project will be constructed within an industrial area (surface water treatment plant) that does not have public access and is zoned as a Public Facility. The Proposed Project is consistent with zoning regulations.

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

The Proposed Project will not include new lighting and will not create a new source of glare or light.

1.2 AGRICULTURE AND FOREST RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agriculture and Forest Resources.				
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department 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 by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

1.2.1 Environmental Setting

While there is substantial agricultural resources within Kings County, there are none in the vicinity of the Proposed Project. The Proposed Project will be located within a developed industrial facility (water treatment plant) and no agricultural or forestry resources are affected by the project.

1.2.2 Discussion

- 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?**

There are no agricultural resources of any sort in the vicinity of the Proposed Project site and no agricultural resources.

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

The Proposed Project site is located on a parcel zoned for Public Facilities and is consistent with that zoning.

- c) **Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?**

The Proposed Project site is located on a parcel zoned for Public Facilities and is consistent with that zoning.

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

There is no forest land one or near the Proposed Project site.

- 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?**

The Proposed Project is located within a developed industrial facility and will not impact other land uses.

1.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations.				
Are significance criteria established by the applicable air district available to rely on for significance determinations?	☒ Yes		☐ No	
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

1.3.1 Environmental Setting

The Proposed Project footprint lies adjacent to the California Aqueduct near Kettleman City in western Kings County. The Proposed Project will be constructed within an existing water treatment plant serving KCCSD. Kettleman City is adjacent to and northeast of the project site, with developed agricultural areas towards the east and the Coastal mountain range to the west.

The Project is located within the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). A 23,490 square-mile area, that consists of approximately 4 million residents, several major metropolitan areas, agricultural land, industrial sources, highways, and schools. The San Joaquin Valley Air Basin (SJVAB) is generally characterized as having mild winters interrupted by periods of extremely hot summer weather. Air basins share a common "air shed", the boundaries of which are defined by surrounding topography. Although mixing between adjacent air basins inevitably occurs, air quality conditions are relatively uniform within a given air basin. The Air Basin experiences episodes of atmospheric mixing caused by inversion layers formed when temperature increases with elevation above ground, or when a mass of warm, dry air settles over a mass of cooler air near the ground.

The SJVAB has been designated a non-attainment area for federal and state standards for federal PM2.5 and ozone standards, and is in attainment of the federal standards for lead (Pb), Nitrogen dioxide (NO2), Sulfur dioxide (SO2), and Carbon monoxide (CO). In addition, the Valley is an attainment/maintenance area for PM10. The State of California and the Federal government have established ambient air quality standards, or criteria, for outdoor air pollutants to protect public health. The U.S. Environmental Protection Agency established national ambient air quality standards pursuant to adoption of federal Clean Air Act. The California Air Resources Board (CARB) establishes state air quality standards under the mandate of the Mulford-Carrell Act. California standards have been established for ozone (O3), carbon monoxide (CO), nitrogen oxide (NOx), sulfur dioxide (SOx), particulate matter, lead, sulfates, hydrogen sulfide, vinyl chloride and visibility reducing particles.

The primary air quality concerns for the Proposed project are excavation/trenching activity dust emissions (generated from excavating/trenching, backfilling and grading operations) and vehicle emissions (associated with operations of gasoline and diesel powered heavy-duty mobile construction equipment). SJVAPCD has one rule that addresses fugitive dust (Rule 403). Several elements of Rule 403, such as protocols for control of potential fugitive dust emissions, have been incorporated into this project. Excavation/trenching, loading, and transport of aggregate materials and soils will be in compliance with Rule 403 prevention, reduction, and Best Management Practices for fugitive dust emissions. However, notification of the SJVAPCD is required only for large operations (disturbing more than 100 acres). Therefore, no notification or filing of a Fugitive Dust Emission Control Plan is required due to the project size.

1.3.2 Discussion

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

The Proposed Project will not conflict or obstruct the implementation of any applicable air quality plan. Emissions related to the construction of the Proposed Project will be limited to the construction period and are de minimus. Operation of the proposed project will not result in any emissions.

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?

The Proposed Project will not result in an increase in emissions. Emissions caused by the construction of the Proposed Project will be limited to the construction phase and would not be greater than existing maintenance activities applied to the project site for weed control. Project operations will not result in emissions.

c) **Expose sensitive receptors to substantial pollutant concentrations?**

There are no sensitive receptors in the vicinity of the project nor any production of substantial pollutants.

d) **Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

The Proposed Project will not generate any emissions associated with orders.

1.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources.				
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the 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, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c) 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

1.4.1 Environmental Setting

The Proposed Project will be located within the fenced and developed area of an existing water treatment plant serving the District. The site is fully graded and either paved or graveled and there is no habitat of any value to wildlife.

A California Department of Fish & Wildlife (CDFW) CNDDDB Natural Diversity Database survey report was conducted in May 2023 for the Kettleman City quadrangle (including adjacent quadrangles) for special-status species occurring in the project area and surrounding vicinity.

Although a number of special status species were identified by CNDDDB search, all of these species were deemed to be absent or unlikely to occur at the project site due to inadequate or incompatible habitat.

A copy of the Biological report, including the CNDDDB search is included in Appendix A.

No Mitigation Measures are required. A pre-activity survey will be completed no less than 14 days and no more than 30 days prior to the beginning of construction activities.

1.4.2 Discussion

- 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 the U.S. Fish and Wildlife Service?**

There is no habitat on the project site that is utilized by special status species and a biological survey did not identify the presence of any special status species.

- b) **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 the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?**

There are no riparian habitat or other sensitive habitats at the Proposed Project site. The Proposed Project is adjacent to the California Aqueduct, however no work will occur within or near the canal.

- c) **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?**

There are no wetland habitat within or near the project site.

- 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?**

The Proposed Project is not within a location that would interfere with the movement of any animals or affect any nursery sites.

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

The Proposed Project does not conflict with any local policies or ordinances protecting biological resources.

- 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?**

The Proposed Project does not affect any habitat nor conflict with any form of conservation plan.

1.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources.				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☐	☒
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	☒

1.5.1 Environmental Setting

The Proposed Project is in the southwestern part of the San Joaquin Valley, near the Coastal Mountain Range and at the western edge of the historic Tulare Lake. The Tulare Lake is a broad and shallow basin whose shoreline fluctuated dramatically based on flood flows from the Tule and Kings rivers, among others. Development of flood control and irrigation facilities greatly reduced the Tulare Lake, allowing agricultural development of the basin.

Four cultural resource investigations have been completed within the Proposed Project area and another six were completed within ½ mile of the Proposed Project site. No prehistoric or historic era cultural resources were identified.

The Proposed Project is located within a fenced and developed water treatment plant. The site was completely graded and graveled during the construction of the water treatment plant and no cultural resources were discovered. The water treatment plant was constructed in 2018 and is not a historic resource.

1.5.2 Discussion

- a) **Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?**

Past and recent cultural resources studies of the Proposed Project have not identified any resource of historic significance.

- b) **Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?**

Past and recent cultural resources studies of the Proposed Project have not identified any resource of prehistoric or archaeological significance.

- c) **Disturb any human remains, including those interred outside of formal cemeteries?**

There are no known human remains on or near the Proposed Project Site.

1.6 ENERGY

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

1.6.1 Environmental Setting

The Proposed Project will install an electrically powered water well within an existing water treatment Plant. Power for the site is provided by PG&E and will be supplied through the existing power system supplied to the water treatment plant. The Proposed Project will replace an existing well so there will be no net increase in power usage.

1.6.2 Discussion

- a) **Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?**

The Proposed Project will replace an existing well and will not result in a next increase in power use during operation. The estimated construction time for the proposed project is less than one month and will not use a significant amount of energy.

- b) **Conflict with or obstruct a state or local plan for renewable energy or energy efficiency**

The Proposed Project does not conflict with any energy plan.

1.7 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Geology and Soils.				
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect 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?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

1.7.1 Environmental Setting

The surface soils of the San Joaquin Valley are a heterogeneous assemblage of alluvium consisting of channel gravels, riverbank sand, silt, and clay, derived from granitic and sedimentary sources (University of California Davis 2008; U.S. Department of Agriculture 2019, cited in AECOM 2019). Most of these sediments were deposited in the Pleistocene and Holocene during times of increased precipitation by runoff from the surrounding Sierra Nevada, Tehachapi, and Coastal

ranges. The bedrock beneath the alluvium consists of older marine sediments deposited during the mid-Mesozoic to Cenozoic eras. A series of turbidity currents, likely caused by undersea earthquakes, landslides, or volcanic eruptions, moved large amounts of sediments downslope to a rapidly subsiding ocean basin. The variable and mixed marine sedimentary, volcanic, and metamorphic rock formations found in the San Joaquin Valley, such as mudstone, sandstone, shale, basalt, andesite, and serpentine, are the result of such erosions and depositions (DeCourten 2010, cited in AECOM 2019). A review of the Santa Cruz sheet geologic map (Jennings and Strand 1958, cited in AECOM 2019) indicates the project site is located in recent Quaternary Great Valley sedimentary fan and basin deposits which are less than 10,000 years in age.

The Proposed Project is located within a fenced water treatment plant site located near Kettleman City and the California Aqueduct. The Proposed Project site is not within a known earthquake fault zone according to California Earthquake Hazard Zone Application. No buildings or dwellings are included with the Proposed Project and there are no known geologic features within the site.

1.7.2 Discussion

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

The Proposed Project does not include any buildings or structures that would place people at risk of injury or death.

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

The Proposed Project will not substantially change the grade or flow of stormwater across the subject property and will not increase soil erosion.

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?

The existing soil conditions are capable of supporting the Proposed Project.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

The existing soil conditions are not expansive.

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?

The Proposed Project does not make use of any waste disposal systems.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

There are no known paleontological or geologic resources within the Proposed Project site.

1.8 GREENHOUSE GAS EMISSIONS

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

1.8.1 Environmental Setting

Naturally occurring GHGs include water vapor (H₂O), carbon dioxide (CO₂), methane (CH₄), nitrous oxide (NO₂), and ozone (O₃). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also GHGs, but they are, for the most part, solely a product of industrial activities. Chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) are halocarbons that contain chlorine, while halocarbons that contain bromine are referred to as bromofluorocarbons (i.e., halons). In the amended CEQA Guidelines Section 15364.5, greenhouse gas emissions (GHGs) include, but are not limited to, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. In California, due to stringent air pollution control rules and regulations, natural gas is the only fossil fuel used to fire steam turbine, gas turbine, or combined cycle power plants. The primary concern here is for emissions that would be generated from equipment use (carbon dioxide and nitrous oxide through the burning of fossil fuels) rather than the emissions associated with ongoing agricultural practices (methane and nitrous oxide) and industrial activities (nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride). The GHG of most concern is CO₂ since it is generated in extremely large quantities by the burning of fossil fuels, can last in the atmosphere for two centuries, and forces climate change more than any other GHG. In California, CO₂ is the major component of power plant GHG emissions, about 99.995 percent.

The Proposed Project would involve limited use of construction equipment (well drilling rig, excavator, and backhoe) to prepare the project site, drill and install the well, well manifold, connection pipeline and install conduit over an area less than 0.1 acres. The construction period will be limited to approximately 30 days. All construction vehicles will be Tier 4 compliant. Operation of the Proposed Project would not generate any emissions.

1.8.2 Discussion

a) **Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

Although the operation of construction equipment would generate emissions, the short duration of the construction phase of the project, combined with the small number of construction vehicles operating would cause the emissions to be de minimus. The Proposed Project is electrically operated and would not produce any emissions.

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

A Climate Action Plan is a comprehensive and focused plan that includes strategies to guide efforts for reducing GHG emissions. While Kings County does not have its own Climate Action Plan, described below is the principal regional plan relating to climate change that applies to Kings County and are most relevant to the Proposed Project.

“San Joaquin Valley Air Pollution Control Board Climate Change Action Plan. The SJVAPCD adopted the Climate Change Action Plan (CCAP) in August 2008, which required the District Air Pollution Control Officer to develop guidance for assessing and reducing project-specific GHG emissions. In December 2009, the SJVAPCD adopted the Guidance for Valley Land-use Agencies in Addressing GHG Emissions Impacts for New Projects Under CEQA. The SJVAPCD also adopted a new district policy, Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency. Both the guidance and policy rely on Best Performance Standards (BPS), which assess the significance of project-specific GHG emissions. (page 9-4)

According to the Valley Air District (SJVAPCD), GHG emission from development projects, primarily occur through energy consumption and vehicle miles traveled (VMT). For development projects, BPS includes project design elements, land use decisions, and technologies that reduce GHG emissions. Project proponents can reduce GHG emissions from energy consumption through building designs that increase energy efficiency, water conservation, and the use of energy efficient appliances. For development projects, BPS also includes project design elements, land use decisions, and technologies that reduce GHG emissions during project operation over time. Project proponents can reduce GHG emissions from energy consumption through building designs that increase energy efficiency, water conservation, and the use of energy efficient appliances.

The Valley Air District’s CEQA guidelines are for land use agencies and apply to stationary sources and development projects (SJVAPCD 2009). The Proposed Project herein will not produce emissions as a result of operations and is consistent with the SJVAPCD action plan.

1.9 HAZARDS AND HAZARDOUS MATERIALS

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

1.9.1 Environmental Setting

According to the California Health and Safety Code Section 25501(o), "hazardous material" means a material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering regulatory agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or

environment. A number of properties may cause a substance to be considered hazardous including toxicity, ignitibility, corrosivity, or reactivity.

The Proposed Project will not make use of, nor expose existing hazardous materials, nor will it generate hazardous waste.

1.9.2 Discussion

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

The Proposed Project does not involve the use of hazardous materials, nor their transport.

- b) **Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?**

The Proposed Project does not involve the use of hazardous materials, nor their transport.

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

The Proposed Project will not cause an emissions or require handling of any hazardous materials.

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

The Proposed Project is not located on a known or suspected hazardous materials site.

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

The Proposed Project is not located within an airport land use plan.

- f) **Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

The Proposed Project will not interfere with any emergency response or evacuation plan, nor inhibit access to any site for emergency vehicles.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The Proposed Project site would not expose people or structures to increased wildfire risk. The Project site will be maintained to prevent excessive weed growth that could contribute to wildfire risk.

1.10 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Hydrology and Water Quality.				
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☐	☒
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial on- or offsite erosion or siltation;	☐	☐	☐	☒
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☐	☐	☒
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?	☐	☐	☐	☒

1.10.1 Environmental Setting

The Proposed Project is located within the existing Kettleman City surface water treatment plant site. The Proposed Project is bound on the west by the California Aqueduct and on the East by Kettleman City. North and south of the Proposed Project Site are undeveloped lands. The Proposed Project site is developed, graded flat, and graveled, as part of the surface water treatment plant site, which includes a stormwater management system.

The well installed as part of the Proposed Project is a replacement for another well located elsewhere within the KCCSD water supply system and will not cause a net increase in groundwater pumping.

1.10.2 Discussion

- a) **Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?**

The Proposed Project will not cause a discharge of water and will not impact water quality.

- b) **Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?**

The groundwater well included in the Proposed Project will pump less than 300 acre feet per year. This well would replace another well of similar capacity and will not result in a net increase in well pumping.

- c) **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:**

The Proposed Project will be located within the existing surface water treatment plant site, which is already graded to manage stormwater. No additional grading will be included with the Proposed Project and no alteration of the existing drainage pattern will occur. There will be no change in drainage patterns, potential erosion, surface runoff or flood flow patterns.

- d) **In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?**

The Proposed Project is not within a flood hazard, tsunami, or seiche zone and there is not a risk of pollutant release as a result of project inundation.

- e) **Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?**

The Proposed Project does not conflict with any water control plans.

1.11 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Land Use and Planning.				
Would the project:				
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 mitigating an environmental effect?	☐	☐	☐	☒

1.11.1 Environmental Setting

The Proposed Project is located within the existing Kettleman City surface water treatment plant site. The Proposed Project is bound on the west by the California Aqueduct and on the East by Kettleman City. North and south of the Proposed Project Site are undeveloped lands. The Proposed Project site is developed, graded flat, and graveled, as part of the surface water treatment plant site, which is located outside of Kettleman City.

1.11.2 Discussion

a) Physically divide an established community?

The Proposed Project does not divide any 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 mitigating an environmental effect?

The Proposed Project is in compliance with the Kings County land use plan and does not conflict with any regulations.

1.12 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. Mineral Resources.				
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
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?	☐	☐	☐	☒

1.12.1 Environmental Setting

The Proposed Project is located between Kettleman City and the California Aqueduct, near the base of the Coastal Mountain Range. Although the mineral resources within the Proposed Project Area have not been thoroughly explored, the Kettleman City region has substantial oil field development and production.

1.12.2 Discussion

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?

The Proposed Project is located within a site already developed to a use unrelated to the development of mineral resources.

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?

The Proposed Project is not located on a site that has been delineated on a plan for important mineral resources.

1.13 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII.Noise.				
Would the project result in:				
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 in other applicable local, state, or federal standards?	☐	☐	☒	☐
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?	☐	☐	☐	☒

1.13.1 Environmental Setting

The Proposed Project is located within the existing Kettleman City surface water treatment plant site, approximately ¼ mile from the west edge of Kettleman City and approximately 1/3 mile from Highway 41. Kettleman City is surrounded by active agriculture and background noise is typical of agricultural activities (tractors, and crop dusters) and highway traffic. There are no airports or airport land use plans in the vicinity of Kettleman City.

Construction of the Proposed Project would involve a limited amount of construction equipment, including a well drilling rig, excavators, and backhoes, which will generate noise and vibrations at levels associated with the operation of such equipment. This noise and vibration generation would be limited to the construction period and would not be substantially different than the existing background noise level in the vicinity of the Proposed Project. Post construction operation of the Proposed Project would not generate noise or vibrations.

1.13.2 Discussion

- 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 in other applicable local, state, or federal standards?**

The noise and vibration generation associated with the Proposed Project would be limited to the construction period and would not be substantially different than the current

operation of farm equipment or highway traffic within the vicinity of the Proposed Project. This is a less than significant impact.

b) Generation of excessive groundborne vibration or groundborne noise levels?

The noise and vibrations generated would be similar to that already generated through existing background conditions. This is a less than significant impact.

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?

The Proposed Project is not within the vicinity of an airstrip or airport land use plan area.

1.14 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Population and Housing.				
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

1.14.1 Environmental Setting

Kettleman City is the nearest population center to the Proposed Project, with a population of approximately 1200 people. The western edge of Kettleman City is approximately ¼ mile from the Proposed Project Site.

The Proposed Project is contained within the existing surface water treatment plant serving Kettleman City, and will have no impact on population or housing.

1.14.2 Discussion

- 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)?**

The Proposed Project will not require any new roads or other infrastructure and will not encourage any population growth.

- b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?**

The Proposed Project will not displace any people or houses.

1.15 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Public Services.				
Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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?	☐	☐	☐	☒

1.15.1 Environmental Setting

The Proposed Project is contained within the existing surface water treatment plant. Access to public services such as fire and police services is readily available. Emergency response personnel have uninterrupted access to the project Site as necessary. Law enforcement for the Proposed Project area is provided through the Kings County Sherriff Department and fire protection is provided through the Kings County Fire Department. The Proposed Project would not alter or affect parks located in the vicinity of the Site. All proposed activities will be contained within the project Site boundary. Project implementation will not require any new or altered off-Site public utilities or infrastructure services above existing conditions.

1.15.2 Discussion

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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?

No additional or special fire protection services will be required as a result of the Proposed Project.

Police protection?

No additional or special police protection services will be required as a result of the Proposed Project.

Schools?

The Proposed Project will not have any effect on schools, school attendance or school transportation.

Parks?

The Proposed Project will not have any effect on parks.

Other public facilities?

There are no other public facilities in the vicinity of the Proposed Project.

1.16 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Recreation.				
Would the project:				
a) 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) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

1.16.1 Environmental Setting

Recreational opportunities do not currently exist at or adjacent to the Proposed Project site. The Proposed Project site consists of graded and gravel areas incorporated into the existing surface water treatment plant, which is not open to public use. The Proposed Project activities will not impact any existing parks or recreational facilities, and does not include construction or modification of recreational facilities. Proposed Project activities will not require public parks or recreation areas to be constructed or expanded. The Proposed Project does not provide recreational uses and would not substantially deteriorate current conditions at the Site.

1.16.2 Discussion

- a) **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?**

The Proposed Project is located in an area that is not open to the public and would not increase the use of any local recreational areas.

- b) **Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

The Proposed Project does not include any recreational facilities.

1.17 TRANSPORTATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Transportation.				
Would the project:				
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 section 15064.3, subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
d) Result in inadequate emergency access?	☐	☐	☐	☒

1.17.1 Environmental Setting

Traffic corridors within the Proposed Project area include State Highway 41, Interstate 5 and local and county roads. Traffic on these roads varies from very high (Highway 41 and Interstate 5) to light and moderate traffic in county roads which fluctuates seasonally, mostly as a function of farming activities.

The Proposed Project would result in a small increase in traffic during the construction period as construction workers commute to the Project site and construction vehicles were operated. Construction workers would commute to the Project via county roads and state highways. Construction would be limited to the Proposed Project footprint and would not require any disruption in the flow of traffic or require a traffic control plan. This increase would be limited to the construction phase of the Proposed Project and would not be substantial in relation to the existing traffic load nor exceed the capacity of existing roads or highways. Measurable increases in transportation and/or vehicular circulation are not expected from the Project activities. Construction equipment and worker parking would be on-Site, and all construction staging activities would be contained within the project Site. All transportation activities will be performed in strict compliance with all regulations and ordinances. All Department of Transportation and California Highway Patrol safety regulations will be strictly followed. The proposed project would not alter the Site's current emergency access features.

1.17.2 Discussion

- a) **Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?**

The Proposed Project would result in a short term and small increase in traffic during the construction of the project elements. This would be limited to the construction phase and is a less than significant impact. Operation of the Proposed Project will not result in an increase in traffic compared to existing conditions.

- b) **Conflict or be inconsistent with CEQA Guidelines section 15064.3(b), which pertains to vehicle miles travelled?**

The Proposed Project will install a single groundwater well and connection pipeline located within an existing water treatment plant. It is not a land use or transportation project; therefore, this section is not applicable (i.e., no impact). Furthermore, the short-term, temporary construction aspect involving less than 10 workers onsite does not require a "vehicle miles travelled" (VMT) approach that identifies the amount and distance of automobile traffic attributable to the project. The VMT approach is most suitable for large projects that involve urban land uses and roadway capacity improvements.

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

The Proposed Project will not include any design features that will introduce or increase transportation hazards.

- d) **Result in inadequate emergency access?**

The Proposed Project does not require any special emergency access and will not impact emergency access in the vicinity of the project.

1.18 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Tribal Cultural Resources.				
Has a California Native American Tribe requested consultation in accordance with Public Resources Code section 21080.3.1(b)?	☒ Yes		☐ No	
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	☐	☐	☐	☒
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☐	☐	☒

1.18.1 Environmental Setting

The Proposed Project is located within the Southern Valley Yokuts ethonographic territory. The Yokuts are one of eight subgroups of the Penutian linguistic phylum that is present across the western coast and inland regions of North America. The Tachi-Yokuts occupied a large portion of the Central Valley, extending from the western shores of Tulare Lake to Fresno Slough. (Orlowski and Baloian, Applied Earthworks, June 2023).

Applied Earthworks performed a Cultural Resource Study, which determined that the site was vacant until the 2018 construction of the Water Treatment Plant and does not contain any resources that are listed or eligible for listed as a cultural resource.

Applied Earthworks performed a search of the Native American Heritage Commission (NAHC) Sacred Lands Files, which identified positive results within or near the Proposed Project Area. NAHC supplied a contact list and Applied Earthworks reached out to the tribal representatives. The Santa Rosa Rancheria Tachi-Yokut Tribe indicated that the Kettleman City area is highly sensitive tribal resources and requested a formal Assembly Bill 52 consultation with KCCSD. Letters from KCCSD were sent to the appropriate contact people of the Tachi-Yokut Tribe on July 12 (received on July 18) and no response was received.

1.18.2 Discussion

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

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

The Cultural Resource Study did not discover any resources that are or eligible to be listed in the Register of Historical Resources or in another local register.

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

Native American outreach was performed through the Applied Earthwork Cultural Resource Study along with previous studies. Although the Proposed Project is in an area of Native American interest, there have been no discoveries of Native American cultural resources within the Proposed Project site.

As a best management practice, Applied Earthwork will provide Cultural Resource Awareness Training to the contractor and construction crew prior to the start of construction.

1.19 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. Utilities and Service Systems.				
Would the project:				
a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☐	☒
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☐	☒
c) Result in a determination by the wastewater treatment provider that 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 related to solid waste?	☐	☐	☐	☒

1.19.1 Environmental Setting

The Proposed Project will improve the water supply flexibility and security for Kettleman City and the surrounding developed area by installing a supplemental groundwater well for the existing surface water treatment plant. Power for system operations will be provided by PG&E. Energy sources required for implementing the project include gasoline and diesel fuels as well as electricity during the construction phase of the Proposed Project. Based on the relatively small scale of the project, the increased usage of energy or utilities will be insignificant.

1.19.2 Discussion

- a) **Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?**

The Proposed Project will not require any water, wastewater, stormwater or other drainage utilities. On-site electrical power will be sufficient for both construction of the Proposed Project and for long term operations.

- b) **Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?**

The Proposed Project will provide a supplemental groundwater well for the existing surface water treatment plant to address long-term drought conditions that could affect surface water supplies.

- c) **Result in a determination by the wastewater treatment provider that 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?**

The Proposed Project would not create wastewater or increase wastewater demand.

- 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?**

The Proposed Project would not create solid waste.

- e) **Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?**

The Proposed Project would not create solid waste.

1.20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Wildfire.				
Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones?				
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	☒ Yes		☐ No	
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 of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

1.20.1 Environmental Setting

The 2018 California Strategic Fire Plan "...reflects CAL FIRE's focus on (1) fire prevention and suppression activities to protect lives, property, and ecosystem services, and (2) natural resource management to maintain the state's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation. A vision for a natural environment that is more fire resilient; buildings and infrastructure that are more fire resistant; and a society that is more aware of and responsive to the benefits and threats of wildland fire; all achieved through local, state, federal, tribal, and private partnerships."

CAL FIRE provides maps for the state of California showing zones of moderate, high and very high risk of fire severity.

In western Kings County, a high fire severity zone has been identified southwest of the intersection of Interstate 5 (I-5) and State Highway 41, approximately 2 miles southwest of the Proposed Project. Although none of the Project components are located within an identified fire hazard severity zone, 2 miles is considered proximate to the fire hazard severity zone.

1.20.2 Discussion

- a) **Substantially impair an adopted emergency response plan or emergency evacuation plan?**

The Proposed Project does not affect any emergency response plan.

- b) **Due to slop, 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?**

The Proposed Project is contained within a developed area that is free of combustible materials and does not increase fire risk.

- c) **Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?**

The Proposed Project is contained within a developed area that is free of combustible materials and does not increase fire risk. No additional infrastructure would be required to mitigate fire risk or provide fire protection.

- 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?**

The Proposed Project is contained within a developed area that is free of combustible materials and does not increase fire risk.

1.21 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
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 that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

1.21.1 Discussion

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

The Proposed Project will be constructed entirely within a developed surface water treatment plant. The project site is entirely graded and covered with gravel with no usable habitat. Plant operations include aggressive bird hazing and weed control to prevent nesting, burrowing, and other wildlife activities. The Proposed Project would not have any impact on habitat or wildlife.

- 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.)**

The Proposed Project would not have any cumulatively considerable impacts.

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

The Proposed Project will provide a supplement water source to the existing surface water treatment plant to increase water supply flexibility and security for the Kettleman City community, especially during extended drought periods. This is a beneficial impact.

Appendix A - Biological Survey

JUNE 1, 2023

KETTLEMAN CITY COMMUNITY SERVICES DISTRICT
110 GENERAL PETROLEUM AVE
KETTLEMAN CITY, CA 93239
ATTENTION: CHRIS LINNEMAN

KCCSD NEW GROUNDWATER WELL PROJECT

The following report has been prepared for Kettleman City Community Services District (KCCSD) at the request of Summers Engineering and consists of a database search and site assessment for the KCCSD New Groundwater Well Project located near Kettleman City. This document is meant to support the environmental permitting required for the project. Included in this document is a list of species from the California Natural Diversity Database (CNDDB) that have occurred within a 5-mile radius of the project site and an assessment of their potential to occur. For any special-status species that could potentially occur, avoidance and minimization measures (AMM) are recommended.

PROJECT DESCRIPTION

Kettleman City Community Services District plans to install a new groundwater well within the existing surface water treatment plant. The proposed well will have a depth of approximately 800 feet and a capacity of 900 gallons per minute (GPM). A new well manifold and pipeline will be installed. The well will be used as a supplementary water supply to the existing water treatment plant during periods when there is insufficient surface water available to meet demands.

Construction activities will include:

- Drill test hole
- Drill bore hole & install casing
- Install well pump and motor
- Install well manifold and connection pipeline

Construction is expected to take approximately 4 weeks.

PROJECT SITE LOCATION

The Proposed Project is located in western Kings County near Kettleman City. The proposed well and connection pipeline will be completely within the fenced Surface Water Treatment Plant facility and all land within the immediate vicinity of the project site is within the treatment plant footprint. The ground surface within the fenced area is either paved with asphalt or graveled. The California Aqueduct is southwest of the Proposed Project site and the Kettleman City is to the northeast.

Coordinates: 36.00488°, -119.965455°

USGS 7.5 Minute Quad Map: Kettleman City

Kings County

CALIFORNIA NATURAL DIVERSITY DATABASE RESULTS

The California Natural Diversity Database (CNDDDB) was queried for listings of special-status species using the Kettleman City quadrangle and all quadrangles within a 5 mile radius of the project site. Additional quadrangles searched included La Cima, Los Viejos, and Kettleman Plain. The results of the database search are summarized below.

Table 1 - CNDDDB Search Results

Common Name	Scientific Name	Federal Status	State Status
American Badger	<i>Taxidea taxus</i>	None	SSC
Blunt-nosed Leopard Lizard	<i>Gambelia sila</i>	Endangered	Endangered
Burrowing Owl	<i>Athene cunicularia</i>	None	SSC
Doyen's Dune Weevil	<i>Trigonoscuta sp.</i>	None	None
Kings Gold	<i>Tropidocarpum californicum</i>	None	CNPS 1B.1
Lost Hills Crownscale	<i>Atriplex coronata vallicola</i>	None	CNPS 1B.2
San Joaquin Coachwhip	<i>Masticophis Flagellum ruddocki</i>	None	SSC
San Joaquin Dune Beetle	<i>Coelus gracilis</i>	None	None
San Joaquin Kit Fox	<i>Vulpes macrotis mutica</i>	Endangered	Threatened
San Joaquin Pocket Mouse	<i>Perognathus inornatus</i>	None	None
San Joaquin Woollythreads	<i>Monolopia congdonii</i>	Endangered	CNPS 1B.2
Tipton Kangaroo Rat	<i>Dipodomys nitratoides nitratoides</i>	Endangered	Endangered
Tricolored Blackbird	<i>Agelaius tricolor</i>	None	Threatened
Tulare Grasshopper Mouse	<i>Onychomys torridus tularensis</i>	None	SSC

SSC - California Species of Special Concern

CNPS - California Native Plant Society

1B - Plants rare, threatened or endangered in California and elsewhere

2B - Plants rare, threatened, or endangered in California but more common elsewhere

.1 - Seriously endangered in California

.2 - Fairly endangered in California

Table 2 - Potential of Species to Occur at Project Site

Common Name	Potential to Occur
American Badger	Absent. Habitat requirements not present at the project site.
Blunt-nosed Leopard Lizard	Absent. Habitat requirements not present at the project site.
Burrowing Owl	Absent. Habitat requirements not present at the project site.
Doyen's Dune Weevil	Absent. Habitat requirements not present at the project site.
Kings Gold	Absent. Project site is well-maintained yard with no established vegetation.
Lost Hills Crownscale	Absent. Project site is well-maintained yard with no established vegetation.
San Joaquin Coachwhip	Absent. Habitat requirements not present at the project site.
San Joaquin Dune Beetle	Absent. Habitat requirements not present at the project site.
San Joaquin Kit Fox	Absent. Habitat requirements not present and site maintains exclusion fence.
San Joaquin Pocket Mouse	Absent. Habitat requirements not present at the project site.
San Joaquin Woollythreads	Absent. Project site is well-maintained yard with no established vegetation.
Tipton Kangaroo Rat	Absent. Habitat requirements not present at the project site.
Tricolored Blackbird	Absent. Habitat requirements not present at the project site.
Tulare Grasshopper Mouse	Absent. Habitat requirements not present at the project site.

Definitions for Potential to Occur:

Present: Species or sign of their presence observed on site.

Likely: Species or sign not observed on site, but reasonably certain to occur.

Possible: Species or sign not observed on site, but conditions are suitable.

Unlikely: Species or sign not observed on site, conditions are marginal.

Absent: Species or sign not observed on site, conditions are unsuitable.

AVOIDANCE AND MINIMIZATION MEASURES (AMM)

AMM 1 - Biological Pre-Activity Surveys

A pre-activity survey shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities or any project activity likely to cause potential impacts to species.

The project site is an existing water treatment facility that is completely surrounded by a chain link fence. The fence serves as a permanent exclusionary barrier for many of the species returned in the CNDDDB search. The site is actively maintained by onsite staff further deterring establishment of nesting or burrowing species at the project site. No evidence of special-status species was observed during the site visit.

FINAL COMMENTS

The findings in this report are intended solely for the purpose of supporting the permit application process necessary for the approval of this project. If you have any questions regarding the finding in this report please don't hesitate to contact me.

Thank you,

Jason Dean
Wildlife Biologist
559.694.1562

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Appendix B - Cultural Resource Study

Cultural Resource Study for the Kettleman City Community Services District New Groundwater Well Project, Kettleman City, Kings County, California

Jena Orlowski and Mary Baloian

Prepared By



Applied EarthWorks, Inc.
1391 W. Shaw Ave., Suite C
Fresno, CA 93711

Prepared For

Summers Engineering, Inc.
887 N. Irwin Street
Hanford, CA 93230

June 2023

MANAGEMENT SUMMARY

At the request of Summers Engineering, Inc., Applied EarthWorks, Inc. (Æ) completed a cultural resource study of 0.15 acres for the proposed New Groundwater Well Project (Project) within the community of Kettleman City, Kings County, California. Kettleman City Community Services District (KCCSD) plans to install a new groundwater well within its existing Surface Water Treatment Plant (Assessor's Parcel Number 042-100-103-000). The proposed well will have a depth of approximately 800 feet and a capacity of 900 gallons per minute. A new well manifold and pipeline will also be installed as part of the Project.

The Project is subject to the California Environmental Quality Act (CEQA), which mandates that public agencies determine whether a proposed project will cause a significant change to the environment, including cultural resources. To assist the KCCSD in fulfilling their responsibility under CEQA, Æ conducted a cultural resource study to identify whether there are historical resources (i.e., cultural resources listed or eligible for listing in the California Register) or unique archaeological resources within the Project area. As part of the study, Æ conducted (a) a records search at the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS); (2) desktop research to better understand the history of land use in the Project area; (3) a search of the Native American Heritage Commission's (NAHC) Sacred Lands File, and nongovernmental outreach to local tribes and individuals; and (4) a pedestrian survey of the 0.15-acre Project area and surrounding 50-foot buffer to identify archaeological and/or historical built environment cultural resources.

The SSJVIC records search revealed four cultural resource investigations have occurred previously within the Project area, and six within 0.5-mile of the Project area. No previously recorded prehistoric or historic-era cultural resources were identified in the Project area; however, the SSJVIC identified one historic-era built environment resource (the California Aqueduct) within a 0.5-mile radius of the Project area.

A search of the NAHC's Sacred Lands Files revealed positive results within or near the Project area. The NAHC supplied a list of individuals to be contacted for information regarding locations of sites of cultural and spiritual significance in the Project area. Æ reached out to the tribal representatives on the list with information about the Project. The Santa Rosa Rancheria Tachi-Yokut Tribe responded stating that the Kettleman City area is highly sensitive for tribal resources and is a place of significance to the Tribe. Due to the cultural sensitivity, they requested that cultural resource awareness training be conducted for all on-site personnel prior to the start of ground-disturbing construction and that an inadvertent discovery procedure be followed in the event resources are encountered during Project activities. They further requested formal Assembly Bill (AB) 52 consultation with the KCCSD. In response to the Tribe's request, KCCSD submitted a formal AB 52 request letter to the Santa Rosa Rancheria Tachi Yokut Tribe (SRR) via certified mail; however, to date, no response has been received for additional consultation by the SRR.

Æ's background research of the Project area revealed that prior to the construction of the Surface Water Treatment Plant, the Project area was vacant and had been vacant for as long as County records can verify. However, Æ's review of historical maps and previous archaeological reports

revealed that the Project lies near the historical Tulare Lake shoreline, which is known to have produced some of the richest and oldest cultural deposits in California.

Æ conducted a cultural resource survey of the Project area on May 1, 2023. No archaeological sites, isolated artifacts, features, or historic-era built environment resources were identified during the pedestrian survey.

No additional archaeological studies are recommended for the proposed Project. However, based on the results of this cultural resource study, Æ recommends the following management practices be adopted: (1) Cultural Resource Awareness Training for all on-site construction personnel prior to the start of the proposed construction, (2) a procedure for the inadvertent discovery of archaeological resources in the event that cultural remains are encountered during Project activities, and (3) a procedure for the inadvertent discovery of unmarked burials if human remains are uncovered during Project activities.

Field notes, maps, and a complete set of photographs from the current investigation are on file at Æ's office in Fresno, California. A copy of the final version of this report will be submitted to the SSJVIC of the CHRIS at California State University, Bakersfield.

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1

INTRODUCTION

At the request of Summers Engineering, Inc., Applied EarthWorks, Inc. (Æ) completed a cultural resource study of 0.15 acres for the New Groundwater Well Project (Project). Kettleman City Community Service District (KCCSD) seeks to install a new groundwater well for the community of Kettleman City, in western Kings County, California (Figure 1-1). The proposed well will be constructed within an existing Surface Water Treatment Plant east of 4th Street in Assessor's Parcel Number 042-100-103-000. Specifically, the Project lies within the northwest quarter of Section 19, Township 22 South, Range 19 East, as depicted on the U.S. Geological Survey (USGS) Kettleman City, 7.5-minute topographic quadrangle (Figures 1-2 and 1-3).

The existing Surface Water Treatment Plant treats surface water from the California Aqueduct, when available. Installation of the proposed groundwater well allows for the treatment of groundwater when water from the California Aqueduct is not available. In short, the well will be used as a supplementary water supply to the existing water treatment plant during periods when there is insufficient surface water available to meet demands. Together, these two sources will provide a clean, reliable source of potable water for the KCCSD service area.

1.1 PROJECT DESCRIPTION

The proposed well and connection pipeline will be installed within the fenced Surface Water Treatment Plant. The new well will have a depth of approximately 800 feet and a capacity of 900 gallons per minute. A new well manifold and pipeline will also be installed. Construction activities will include drilling a test hole, drilling a bore hole and installing casing, installing a well pump and motor, and installing well manifold and connection pipeline. Construction is expected to take approximately 4 weeks.

1.2 REGULATORY CONTEXT

The Project is subject to the California Environmental Quality Act (CEQA) which mandates that public agencies determine whether a proposed project will cause a significant change to the environment, including cultural resources (Public Resource Code [PRC] 5020 and 21000 et. seq. and California Code of Regulations 15000 et. seq.). The KCCSD is the lead agency responsible for determining whether the Project may have a significant effect on historical resources and/or unique archaeological resources (per CEQA Guidelines Section 15064.5).

To assist the KCCSD in fulfilling their responsibility under CEQA, Æ carried out a cultural resource study to identify whether there are cultural resources within the Project area. As part of the study, Æ conducted (1) a records search at the Southern San Joaquin Valley Information Center (SSJVIC) of the California Historical Resources Information System (CHRIS); (2) desktop research to better understand the history of land use in the Project area; (3) a search of the Native American Heritage Commission's (NAHC) Sacred Lands File, and nongovernmental outreach to local tribes and individuals; and (4) a pedestrian survey of the 0.15-acre Project area and surrounding 50-foot buffer to identify archaeological and/or historical built environment cultural resources.

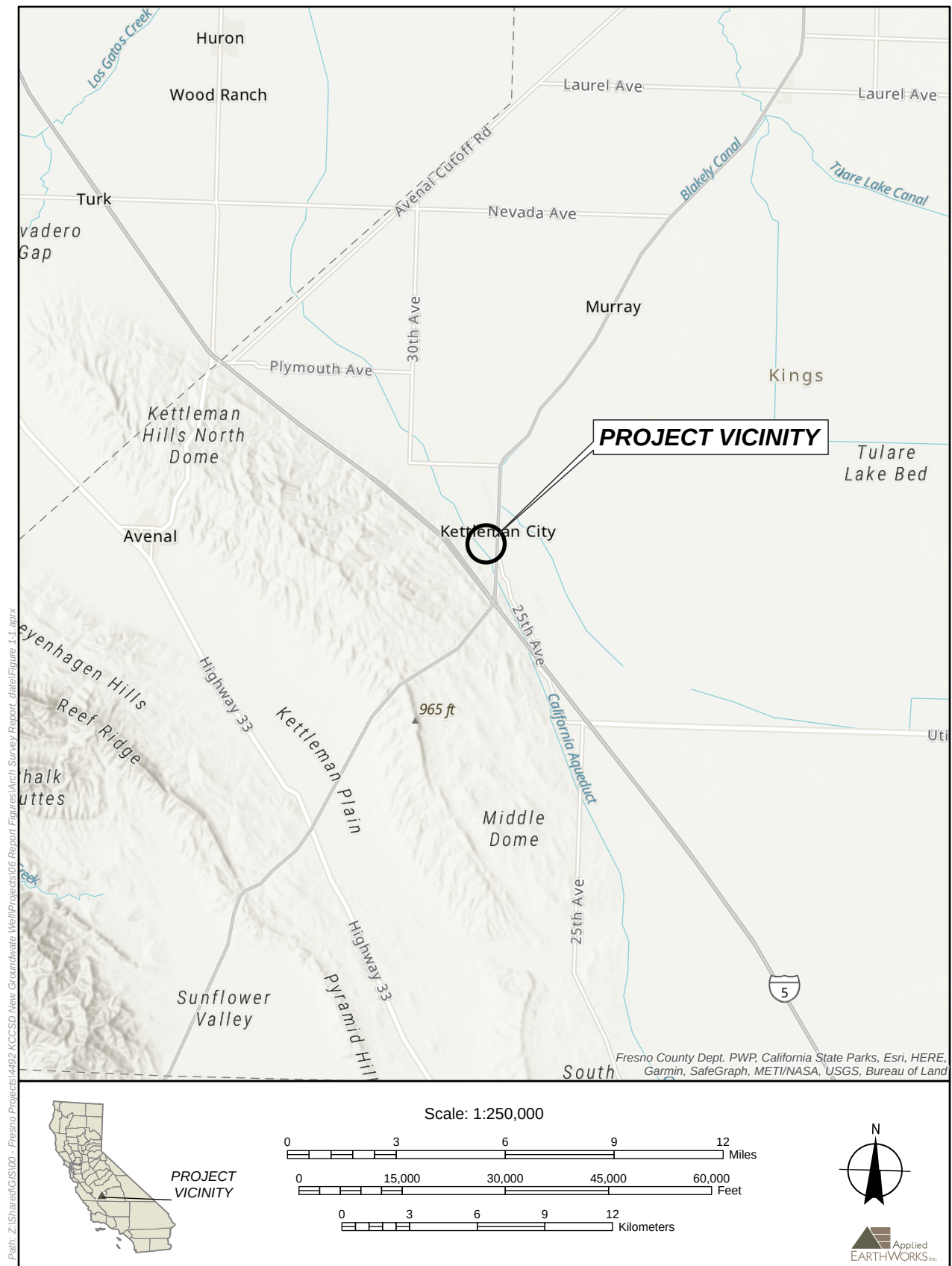


Figure 1-1 Project vicinity in Kings County, California.

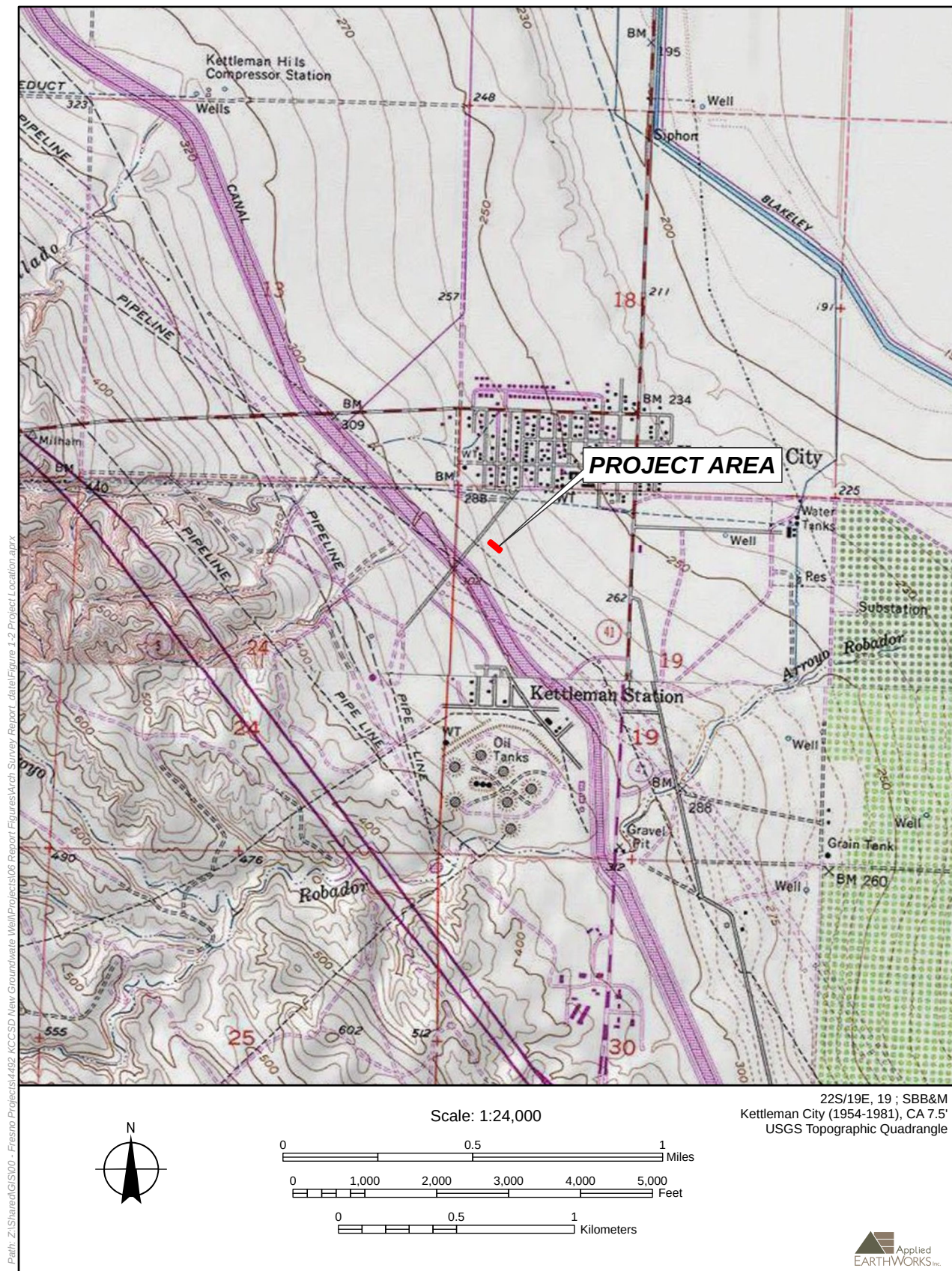


Figure 1-2 Project area on the USGS Kettleman City 7.5-minute topographic quadrangle.



Figure 1-3 Aerial view of the Project area.

1.3 PROJECT PERSONNEL

Principal Archaeologist Anna Hoover (M.S. Registered Professional Archaeologist [RPA] 28576661) served as principal investigator and project manager and provided quality assurance and quality control for the project. She has more than 24 years of experience in California archaeology. Staff Archaeologist Gabriel Granado (B.A.) conducted the cultural resource pedestrian survey. Granado has more than 4 years of experience conducting archaeological surveys in California. Staff Archaeologist Jena Orlowski (M.A., RPA 61015544) prepared this report. Orlowski has more than 15 years of experience in archaeology. Principal Archaeologist Emerita Mary Baloian (Ph.D., RPA 15189) reviewed the report for technical accuracy. Résumés for key personnel are provided in Appendix A.

1.4 REPORT ORGANIZATION

This document consists of six chapters. Following this introduction, Chapter 2 describes the environmental and cultural setting of the Project area. Chapter 3 presents Æ's methods for the study, including the records search, background research, Native American outreach, and field investigations. Results of the survey efforts are discussed in Chapter 4, while Chapter 5 contains a summary and recommendations. A complete listing of references cited is provided in Chapter 6. Appendix A provides résumés for key personnel; Appendix B presents the results of the records search; and Appendix C contains the documentation of communication with the NAHC and local tribal representatives.

NATURAL AND CULTURAL SETTING

The environmental discussion focuses primarily on natural conditions and resources that played a major role in human occupation and resource utilization. The archaeological overview discusses previous studies that defined the temporal-cultural divisions of prehistoric occupation in the Central Valley and Kettleman City area. The ethnographic section describes the native people who occupied the Project area during the late prehistoric and early historic eras, while the history section provides specific details about historic-era activities in the Project vicinity.

2.1 ENVIRONMENT

The Project is in the San Joaquin Valley, the southern half of an elongated trough called the Great Valley. The Great Valley is a 50-mile-wide lowland that extends approximately 500 miles south from the Cascade Range to the Tehachapi Mountains (Norris and Webb 1990:412). Between the Mesozoic and Cenozoic eras, the Great Valley served as a shallow marine embayment containing numerous lakes, primarily within the San Joaquin Valley (Norris and Webb 1990:412). Waters began to diminish around 10 million years ago during the late Pliocene and eventually were cut off from the ocean altogether by the formation of the Coast Ranges, leaving tributaries and small lakes that survived until the historic era (Hill 1984:28; Norris and Webb 1990:380).

Much of the Great Valley rests upon thick strata of alluvial sediments washed down from the Sierra Nevada and Coast Ranges during the Quaternary (Norris and Webb 1990:9-12). It is this same soil that today makes the valley a fertile agricultural region. Below these levels are layers from the Pliocene and older epochs, which consist of both marine (shale, sandstone) and nonmarine (basalt, andesite) materials.

The San Joaquin and Kings rivers are the dominant hydrological features in the San Joaquin Valley. Streams flowing from the main rivers are seasonal and remain dry for most of the year. However, before historic drainage projects and modern reclamation, seasonal flooding from the San Joaquin and Kings rivers produced extensive wetlands in the valley. Lakes, marshes, and sloughs once covered more than 3,000 square miles in the San Joaquin Valley (Moratto 1984:168). The largest of these was ancient Tulare Lake, which was north and east of the Project area and spanned as much as 30 miles from shore to shore (Preston 1981).

The Tulare Lake basin developed over the past 2–3 million years as a result of the formation of the Coast Range and continuing uplifts in the Sierra Nevada. During the Pleistocene, fine clay sediments collected at the base of the lake, which later became covered by the coarser alluvium brought by the network of rivers from the west that fed the lake (Preston 1981:3-4). Water from melting glaciers and perennial runoff has become trapped by this layer as semiconfined or confined aquifers.

The broad but shallow dimensions of the Tulare Lake basin resulted in wide fluctuations of the lake's shoreline during both prehistoric and historical times. Filled by runoff from rivers and creeks draining the western slope of the Sierra Nevada, Tulare Lake was the largest naturally

occurring lake in California as recently as 1920 (Norris and Webb 1990:433) (Figure 2-1). The size of the lake was gradually reduced by historic development of irrigation systems and reclamation of waters draining from the Kings River and other sources. Today the lake only exists in time of flooding, and the deep reserve of groundwater is tapped for private and public use. The development of agriculture within the Project area resulted in the replacement of native plants and animals with domesticated species. The previously swampy valley floor had provided a lush habitat for a variety of animals.



Figure 2-1 Project area relative to Tulare Lake as depicted on 1854 General Land Office plat map.

The abundance of water provided a rich habitat for plants and animals. Common native plants would have included white, blue, and live oaks (*Quercus* spp.) as well as walnut (*Juglans* sp.), cottonwood (*Populus fremontii*), willow (*Salix* sp.), and tule (*Schoenoplectus* sp.), especially hardstem bulrush (*Scirpus acutus*). Also prominent is cattail (*Typha* sp.) and various grasses, forbs, and sedges. A variety of animals lived in and around the Project area prior to the modern era, including mule deer (*Odocoileus hemionus*), tule elk (*Cervus* sp.), pronghorn (*Antilocapra americana*), grizzly bears (*Ursus arctos californicus*) and black bears (*U. americanus*) (Preston 1981:245-247). Birds in the area included American osprey, redwing blackbird, marsh hawk, willow and Nuttall's woodpeckers, western meadowlark, and quail. The lakes, rivers, and streams throughout the vicinity provided habitat for anadromous and freshwater fish including Chinook salmon, white sturgeon, Sacramento perch, rainbow trout, thick-tailed chub, and Sacramento sucker (Preston 1981:249). These resources provided humans with a diverse range of medicinal, dietary, and other materials during prehistory and the historic era.

2.2 PREHISTORY AND ARCHAEOLOGY

The San Joaquin Valley prehistoric record is among the least understood of all regions in California. Reconstruction of past cultural patterns has been stymied by two key factors: geomorphology and human activity (Dillon 2002; Siefkin 1999). The valley floor that encompasses the Project area has been inundated with thick alluvial deposits resulting from granitic and sedimentary outflow from the San Joaquin and Kings rivers, particularly during mass flood events. This pattern has continued for millennia and has resulted in the burial of early- to mid-Holocene archaeological sites, estimated to be buried at depths up to 10 meters along the lower stretches of the San Joaquin Valley drainage systems (Meyer et al. 2010; Onken 2019). Thus, compared to other regions in the state, there is a paucity of research and a related lack of data from which to build a complete understanding of past human behavior specific to the central valley.

Nevertheless, available data for sites in valley lacustrine environs help identify key cultural changes within the Project area and surrounding environs. The summary of cultural traits presented below is based on a review of San Joaquin Valley lacustrine, riverine, and valley floor site data discussed in Rosenthal et al. (2007). Cultural periods and accompanying dates (given as calibrated calendar years [cal B.C. or A.D.]) are based on Rosenthal et al. (2007:150-159), Moratto (1984:333), McGuire and Garfinkel (1980:49-53), and Bennyhoff and Fredrickson's chronologies (Fredrickson 1973, 1974).

The Paleo-Indian Period (11,500–8550 cal B.C.) is represented by ephemeral lacustrine sites dominated by atlatl dart and spear projectile points. The earliest evidence of distinct valley cultural patterns appears during the Lower Archaic Period (8550–5550 cal B.C.) when crescents and stemmed projectile points are first used and evidence appears of dietary use of freshwater fish, waterfowl, mussels, deer, and pronghorn. The Middle Archaic (5550–550 cal B.C.) includes a time, estimated between 5950–3150 cal B.C., when semipermanent villages first appear along riverbanks in tandem with larger, more established lacustrine villages. Stone tools were used in abundance, meanwhile ground stone tool kits emerged along with long-distance trade and exchange networks focused on obsidian, shell beads, and ornaments.

New cultural patterns emerged during the Upper Archaic Period (550 cal B.C. to cal A.D. 1100), especially between 3150–1350 cal B.C. when a distinct shift in burial practices occurred and geographic differences in site and artifact types appeared. The time between 1350–650 cal B.C. is marked by the sudden presence of mound sites in the valley. Widespread proliferation of specialized technology is evident, including new types of bone tools, projectile points, and ceremonial objects such as wands and blades. Paleoethnobotanical studies also suggest the use of labor-intensive and seasonally abundant resources, including acorns, pine nuts, salmon, and shellfish. Similarly, the Emergent Period, extending from cal A.D. 1000 to the historic era, is marked by continued variation in settlement and burial patterns appear across the valley, coupled with the disappearance of atlatl and dart tool kits that are replaced with bow-and-arrow technology (i.e., small corner-notched and Desert series projectile points) at about cal A.D. 1000. Fishing tool kits expanded to include more efficient harpoons, bone fishhooks, and gorge hooks. In the Tulare basin, pottery obtained via trade appears as well as baked clay balls used for cooking and making carved clay effigies.

The Project lies near the edge of Tulare Lake shore, which is known to have produced some of the oldest artifacts in California. The first large-scale excavations of the southern San Joaquin Valley were conducted near Tulare and Kern lakes by Gifford and Schenck (1926), who unearthed flexed burials, pottery, obsidian arrow points, milling stones and mortars, and intricately fashioned steatite artifacts. Later archaeological investigations revealed that occupation occurred possibly as early as 11,000 years ago (Fredrickson and Grossman 1977; Sampson 1991). The Witt Site (CA-KIN-32) on the southwest shore of Tulare Lake contains fluted projectile points as well as later types, suggesting continual occupation of the basin until historical contact (Fenenga 1993; Moratto 1984:81-82). Riddell and Olson (1969:121) proposed that the contour at 192 feet above mean sea level (amsl) marked the Late Pleistocene shoreline of Tulare Lake. The significance of that level was confirmed by Fenenga (1993), who recovered Clovis materials at or near the 190-foot elevation.

In 2001–2002, the Center for Archaeological Research (CAR) at California State University, Bakersfield performed an investigation of the western edge of the Tulare Lake basin east of Blakely Canal (Gardner 2003). The study involved random and selected surveys and subsurface examination using excavated trenches and pits. CAR encountered seven prehistoric sites, including two lithic scatters (CA-KIN-83 and -85) that lie approximately 4 miles north of Kettleman City along State Route 41. CA-KIN-85 contains flaked and ground stone tools, including an obsidian projectile point midsection, a chert projectile point or knife tip, two jasper cores, two chert bifaces, two manos, a possible sandstone bowl, and a variety of debitage, and human remains (Gardner 2003:69-70). CA-KIN-83, although not as extensive as CA-KIN-85, consists of similar cultural constituents as well as an *Olivella* spire-lopped shell bead (Gardner 2003:69). In addition, CAR's study recorded 46 prehistoric isolates, including a cluster of 7 isolates found near the eastern shoulder of State Route 41. Interestingly, while none of the materials identified were dated to the late Pleistocene, most sites and isolates were found within 100 meters of the 190-foot contour, suggesting that occupation of the shoreline area continued beyond the Clovis era.

In 2003, Applied EarthWorks, Inc. conducted an archaeological study in close proximity to CAR's investigation (Baloian and Lloyd 2003). AE's investigations yielded artifacts consistent with the cultural material identified at CA-KIN-85. The material is similar to other cultural

resources located on the east side of State Route 41. The site, recorded as Kiewit-41, includes evidence of food processing, tool manufacture, trade, and possible human interment. Baloian and Lloyd (2003:5.1) concluded that the breadth of activities indicated by the assemblage suggests that Kiewit-41 was an occupation site, perhaps associated with the Yokuts village of *Walna* near Kettleman City (Wallace 1978:448; see Section 2.3).

2.3 ETHNOGRAPHIC SETTING

The Project area is in the Southern Valley Yokuts ethnographic territory. The Yokuts are one of eight subgroups of the Penutian linguistic phylum that is present across the western coast and inland regions of North America from Canada to Mexico (Golla 2011:128). The Yokuts had many language subgroups and spoke a variety of mutually intelligible dialects across the San Joaquin Valley and Sierra Nevada (Golla 2011). The Southern Valley Yokuts populated the shores of Tulare, Buena Vista, and Kern lakes, their connecting sloughs, and the lower portions of the Kings, Kaweah, Tule, and Kern rivers (Latta 1999; Silverstein 1978).

The Tachi, who were the northernmost of the Tulare Lake tribes, occupied a large area of the Central Valley, extending from the western shores of Tulare Lake northward to the Fresno Slough and westward to the Coast Ranges (Kroeber 1976:484). The Tachi Yokuts village *Wiu* (also *Waiu*, or Mussel Slough) was just south of Lemoore at the present location of the Santa Rosa Rancheria Tachi-Yokut reservation, northeast of the Project area (Kroeber 1976:484). The Tachian village of *Walna*, near the present-day town of Kettleman City, was not far from the Project area (Wallace 1978:448). Along with the Chunut and Wowol, who inhabited the northeast and southern borders of the lake, respectively, the Tachi relied on the plentiful supply of lacustrine resources, including lake trout, chubs, perch, and suckers as well as turtles and shellfish. Fires were burned near the lakeshore at night to attract fish, which were commonly caught in nets dragged behind tule rafts, although spears, fire, and basketry also were used (Wallace 1978:450). Wild seeds and acorns were harvested in the early summer and fall, respectively, and stored for use throughout the year. Fire was used to enhance the productivity of vegetable foods. Waterfowl and mammalian game attracted to the lake supplemented the Yokuts diet.

Intensive European exploration of Yokuts territory did not take place until the early nineteenth century (Wallace 1978). As a result of European contact with Native American populations of the San Joaquin Valley, indigenous populations were significantly reduced by disease and settlement patterns were disrupted as a result of recruitment for Missions Soledad, San Luis Obispo, San Antonio de Padua, and San Juan Bautista. However, even more traumatic impacts to the valley's Native American population were caused by a series of parasitic (i.e., malaria) and viral (e.g., influenza) epidemics that began in 1833. The diseases struck with such virulence that by 1846 an estimated 40–75 percent of Native Americans had died during outbreaks in California. By 1850, of the estimated 15,700 people constituting the 15 tribelets of the Southern Valley Yokuts, approximately 3,680 are estimated to have survived into the mid-twentieth century (Cook 1955).

2.4 HISTORICAL SETTING

The first organized Euro-American foray into the western valley occurred in 1806 when Spanish Lieutenant Gabriel Moraga and his men explored stretches of the San Joaquin, Kings, and Kaweah rivers (Cook 1960:247-253). The most relevant study to the Project area was the 1815 travels of Sergeant Juan de Ortega and his band, who camped at a place they called “Chenem” just after crossing the coastal mountains from the Presidio of Monterey (Cook 1960:268).

Chenem was later occupied and renamed by Mexican settlers, who referred to the place as Posa Chiné or Poso Chané. A 1932 Tulare newspaper article stated: “[At] one time, there were perhaps a dozen Spanish and Mexican families living at the old Posa. They ranged cattle and horses and a few goats. The swamp area was cultivated and planted trees and vines” (Clough and Secrest 1984:40).

In 1854, the Higuera family established a homestead at Posa Chiné/Poso Chané, near present-day Coalinga, and herded cattle and stock as far as the west shore of Tulare Lake. They likely resided there until 1862–1863 when a flood destroyed the watering hole.

Ranching had been a part of the state’s economy since the Mexican period, the industry’s growth accelerated as many successful prospectors and businessmen reinvested their profits from the gold rush in cattle and sheep herds. In the early days of ranching, sheep were a valued commodity because they not only could be sold for consumption but could be sheared for their wool. From 1857 to 1871, the amount of wool produced in California increased more than 20 fold, while revenue grew at an average annual rate of 30 percent (Vandor 1919:164). Similarly, cattle provided beef and dairy products as well as hides.

By the early 1870s, however, the scales began to tip in favor of agriculture. The construction of extensive irrigation systems, financed by developers like A. Y. Easterby, converted the valley’s dry soils into fertile farmlands. The 1874 “no fence” law underscored the growing dominance of agricultural interests and resulted in both operational and monetary repercussions for the sheep and cattle industry. “The ‘no fence’ law obligated the stock owner to herd his cattle and sheep, whereas before the stock roamed at will and was not assembled except for the annual rodeo. He was also held responsible for damage done by his beasts. The farmer was not required to fence his holdings, though he occasionally did so” (Vandor 1919:163).

The “no fence” law was a major setback to ranching; the stockman no longer had the entire extent of the San Joaquin Valley at his disposal and was now burdened with the cost of fencing in his herds and flocks. Nevertheless, the industry continued to grow within the county, albeit not at the same pace as agriculture. The cattle empire of Miller and Lux, which operated well into the twentieth century, owned as much as 145,000 acres of pastureland in Madera County (Barcroft 1933) and utilized additional grazing lands within Kings County (Roberts 2008:79).

While much of the valley was covered in wheat fields in the mid-1870s (Clough 1986), farmers had been experimenting with grape vines and citrus trees since the 1850s. By the 1880s, a nationwide glut in the grain market and attendant drop in the price of wheat caused valley farmers to shift their attention to these newer crops. In a relatively short time, large-scale vineyards and orchards had replaced wheat fields in most regions of the valley.

2.4.1 Kettleman City

The discovery of petroleum and natural gas in the Kettleman Hills and the plains to the east led to the establishment of Kettleman City and Avenal in the late 1920s (Preston 1981:192). A. Mansford Brown began planning the town of Kettleman City, named for the cattle baron David Kettleman, in 1929 (Gudde 1998:193). Brown had planned Kettleman City with wide streets and well-built homes. In addition to planning the town site Brown donated land for a school and community church. He also established the water works, which he had owned as late as 1940 (Brown 1940:317). The southern San Joaquin Valley has seen further developments since the 1960s, including the construction of the California Aqueduct and several major highways. Kettleman City, which lies near the intersection of Interstate 5 and State Route 41, has become a popular rest stop for motorists.

3 METHODS

This chapter describes methods used to complete the cultural resource study of the Project area. This includes a records search to identify previous resources and studies within and adjacent to the Project area, contact with Native Americans who may have knowledge about the area, and an intensive archaeological pedestrian survey.

3.1 RECORDS SEARCH

At Æ's request, the SSJVIC of the CHRIS at California State University, Bakersfield, performed a records search on April 24, 2023, to identify previously recorded resources and prior surveys within the Project area and surrounding 0.5-mile search radius. SSJVIC staff consulted cultural resource location and survey base maps, reports of previous investigations, cultural resource records, the listings of the Office of Historic Preservation Historic Properties Directory, Archaeological Determinations of Eligibility, and the California Inventory of Historic Resources (Appendix B).

3.2 BACKGROUND RESEARCH

Prior to conducting a pedestrian archaeological survey, Æ conducted background research to identify areas within the Project area where extant historic-aged buildings, structures, or objects might be present, or where archaeological deposits might exist. Desktop and online library research focused on historical maps, aerial images, atlases, and photographs. Æ reviewed and compiled information from various sources including:

- General Land Office maps (<https://glorerecords.blm.gov/default.aspx>; 1854, 1881, 1883, 1889);
- U.S. Geological Survey topographic maps (<https://ngmdb.usgs.gov/topoview>; 1933, 1964, 1954, 1963);
- Aerial photographs, accessed through the Map Aerial Locator Tool maintained by California State University, Fresno (<http://malt.lib.csufresno.edu/MALT/>; 1937 and 1964); FrameFinder administered by the University of California, Santa Barbara (http://mil.library.ucsb.edu/ap_indexes/FrameFinder/); and
- HistoricAerials.com administered by NETRonline (1933, 1937, 1943, 1948, 1954, 1957, 1958, 19652, and 1965).

3.3 NATIVE AMERICAN OUTREACH

Pursuant to California PRC Section 5097.9, state and local agencies cooperate with and assist the NAHC in its efforts to preserve and protect locations of sacred or special cultural and spiritual significance to Native Americans. Æ contacted the NAHC to request a search of its Sacred Lands File to identify Native American resources in the Project area and obtain the names and contact information for individuals knowledgeable of such resources.

The NAHC responded on May 19, 2023, with its findings and attached a list of Native American tribes and individuals culturally affiliated with the Project area. Æ sent a letter summarizing the cultural resource investigation to each of the contacts identified by the NAHC. In the letter, Æ sought input on known sacred areas within the Project area and surrounding region. Æ followed up with a telephone call or e-mail to each Native American contact to confirm that the correspondence was received and to provide an opportunity for comment.

Sending letters and recording responses received are part of Æ's standard tribal outreach to complete a cultural resource study and are not intended to serve the purpose of satisfying Assembly Bill (AB) 52 or local government-to-government Native American tribal consultation. Æ's record of tribal outreach is included in Appendix C.

3.4 PEDESTRIAN FIELD SURVEY

On May 1, 2023, Æ Staff Archaeologist Gabriel Granado conducted an intensive pedestrian survey of the proposed Project area. Granado surveyed the entire Project area using parallel transects spaced 5 meters apart. Photographs were taken using an iPad camera and geospatial data was collected with the iPad's built-in global positioning system. Methods and observations were recorded on a Daily Work Record and a Survey Field Record. All photographs and field records are on file at Æ's office in Fresno, California.

4 FINDINGS

This chapter provides results of the SSJVIC records search, Æ's background research, the NAHC's search of the Sacred Lands File and Native American outreach, and describes the pedestrian survey, including observations of field conditions within the Project area.

4.1 RECORDS SEARCH RESULTS

The SSJVIC records search (Record Search File No. 23-137) revealed that four cultural resource investigations have occurred previously within the Project area and six investigations have been conducted within the 0.5-mile search radius (Appendix B). Additionally, the records found no previously recorded cultural resources within the Project area and only one resource (the California Aqueduct) within the 0.5-mile search radius.

One of the previous studies within the Project area identified by the SSJVIC is the historic resources assessment for the Kettleman City Surface Water Treatment Plant prior to its construction. This study was conducted by the Sanberg Group, Inc. in April 2012 and included a records search, Native American outreach, and a pedestrian survey of the Project area. No cultural resources were identified in the Project area as a result of that investigation (Daly 2012).

4.2 BACKGROUND RESEARCH

The Project area is between the residential portion of Kettleman City and the California Aqueduct within the existing Surface Water Treatment Plant. Although background research identified significant archaeological resources within 5 miles of the Project area (see Section 2.2), no cultural resources are known to exist within the Project area; nor were any discovered during construction of the Surface Water Treatment Plant. A review of historical maps and aerial images of the Project area confirmed the land was vacant until 2018; at which time construction began on the existing facility (see Appendix B for a list of historical maps and aerial images viewed).

Ethnohistorical accounts revealed that the Tachian village of *Walna*, was near the present-day town of Kettleman City (Wallace 1978:448); information that is consistent with concerns expressed by the Santa Rosa Rancheria Tachi-Yokut Tribe (see below). Previous archaeological investigations within Tulare Lake proposed that the 192-foot amsl contour marks the Late Pleistocene shoreline of Tulare Lake (Fenenga 1993; Riddell and Olsen 1969:121). The Project area lies at 285-feet amsl near the historic Tulare Lake shore (Figure 2-1).

4.3 NATIVE AMERICAN OUTREACH

The NAHC stated in its May 19, 2023, response to Æ's request, that the search results were positive for the presence of cultural resources in the Project vicinity. The NAHC also supplied a list of individuals to be contacted for information regarding locations of sacred or special sites of cultural and spiritual significance in the Project area.

On May 25, 2023, Æ sent a letter describing the Project and its location to:

- Tribal Administrator Patti Dunton of Salinan Tribe of Monterey, San Luis Obispo Counties;
- Chairperson Karen White of Xolon-Salinan Tribe;
- Cultural Preservation Administrator Penny Hurt of Xolon-Salinan Tribe;
- Stan Alec of the Kings River Choinumni Farm Tribe;
- Chairperson Leo Sisco of the Santa Rosa Rancheria Tachi-Yokut Tribe;
- Chairperson Neil Peyron of the Tule River Indian Tribe;
- Environmental Department Head Kerri Vera of the Tule River Indian Tribe;
- Tribal Archaeologist Joey Garfield of the Tule River Indian Tribe; and
- Chairperson Kenneth Woodrow of the Wuksache Indian Tribe/Eshom Valley Band.

Æ followed up with all tribes by e-mail and/or telephone on June 5, 2023. To date, Æ has received responses from two of the tribal representatives contacted. The Xolon-Salinan Tribe responded via e-mail on June 5, 2023 stating that the Project area is outside their homelands.

The Santa Rosa Rancheria Tachi-Yokut Tribe responded by e-mail on June 9, 2023, requesting a meeting to discuss the project further. Æ's Project Manager, Anna Hoover, spoke to Santa Rosa Rancheria's Cultural Director, Shana Powers via telephone on June 13, 2023. Ms. Powers relayed that the Kettleman City area is highly sensitive for tribal resources and is a place of significance to the Tribe. Due to the sensitivity, the Tribe requested cultural resource awareness training for all on-site personnel prior to the start of ground-disturbing construction and that an inadvertent discovery procedure be followed in the event resources are encountered during Project activities. They further requested formal AB 52 consultation with the KCCSD.

In response to the Tribe's request, KCCSD submitted a formal AB 52 request letter to the Santa Rosa Rancheria Tachi Yokut Tribe (SRR) via certified mail on July 10, 2023. The letters were delivered and signed for by a tribal representative on July 20, 2023. To date, no response has been received for additional consultation by the SRR. A log detailing the outreach efforts and responses is provided in Appendix C.

4.4 PEDESTRIAN SURVEY

On May 1, 2023, Æ Staff Archaeologist Gabriel Granado conducted an intensive archaeological pedestrian survey of the 0.15-acre Project area and exposed ground in the surrounding 50-foot buffer (Figure 4-1) at the Surface Water Treatment Plant. The plant lies in between a residential neighborhood and the California Aqueduct, north of State Route 41. The setting can be described as semi-urban, semi-suburban. The survey area is a linear polygon extending from the existing water treatment building to the southeast within the existing plant.



Figure 4-1 Aerial view showing the Project area and survey coverage.

The southwest portion of the 50-foot buffer lies just outside the facility's fence (Figure 4-2). Inside the treatment plant, the ground has been heavily disturbed by the plant's initial construction. The ground surface has been entirely graded and imported gravel has been spread throughout, greatly limiting surface visibility. Along the plant's perimeter, the area has also been graded and serves as an access road. Imported gravels are present outside the fence, although less concentrated. Much of the buffer was free of vegetation, which greatly enhanced ground visibility (approximately 70 percent visibility; Figure 4-3). No cultural resources were identified during the survey.



Figure 4-2 Overview of 50-foot buffer, outside of Project area. Southwest end of the Project area, facing southeast.



Figure 4-3 Overview of Project area from southeast end of proposed trench, facing northwest.

5 SUMMARY AND RECOMMENDATIONS

5.1 SUMMARY

At the request of Summers Engineering, Æ conducted a cultural resource study of 0.15 acres for the New Groundwater Well Project in Kettleman City, Kings County, California. The proposed well will be constructed within an existing Surface Water Treatment Plant. The Project is subject to the CEQA, which mandates that public agencies determine whether a proposed project will cause a significant change to the environment, including cultural resources. To assist the KCCSD in fulfilling their responsibility under CEQA, Æ carried out a cultural resource study to identify whether there are cultural resources within the Project area. As part of the study, Æ requested a records search from the SSJVIC and a search of the NAHC's Sacred Lands File, conducted outreach with local Native American representatives, reviewed historical maps and aerial photographs, and performed an intensive pedestrian field survey of the Project area.

The records search conducted by the SSJVIC revealed four cultural resources investigations have occurred previously within the Project area; the most recent study was conducted in 2012 prior to the construction of the existing Surface Water Treatment Plant. Six investigations have been conducted within the 0.5-mile search radius. The records search revealed no cultural resources within the Project area, and only one historic-era resource (the California Aqueduct) within the 0.5-mile search radius.

A search of the NAHC's Sacred Land File revealed a positive response for cultural resources within or near the Project area. Æ initiated contact with tribal groups listed on the NAHC's provided contact list. Æ received two responses to date—one from the Xolon-Salinan Tribe and the other from Santa Rosa Rancheria Tachi-Yokut Tribe. The Xolon-Salinan Tribe confirmed that the Project is outside their homeland. The Santa Rosa Rancheria Tachi-Yokut Tribe shared that the Kettleman City area is highly sensitive for tribal resources and a place of significance to the Tribe. Due to the cultural sensitivity, they requested that cultural resource awareness training be conducted for all on-site personnel prior to the start of ground-disturbing construction and that an inadvertent discovery procedure be followed in the event resources are encountered during construction. They further requested formal AB 52 consultation with the KCCSD. In response to the Tribe's request, KCCSD submitted a formal AB 52 request letter to the SRR via certified mail; however, to date, no response has been received for additional consultation by the SRR.

Æ's background research of the Project area revealed that prior to the construction of the Surface Water Treatment Plant, the Project area was vacant and had been vacant for as long as County records can verify. Æ's review of ethnohistorical accounts, historical maps and previous archaeological reports revealed that the Tachian village of *Walna*, was near the present-day town of Kettleman City; information that is consistent with concerns expressed by the Santa Rosa Rancheria Tachi-Yokut Tribe. Additionally, the Project lies near the historical Tulare Lake shoreline, which is known to have produced some of the richest and oldest cultural deposits in California.

Æ conducted an intensive pedestrian survey of the entire 0.15-acre Project area and surrounding 50-foot buffer to identify cultural resources. No archaeological sites, features, or isolated artifacts were identified as a result of the survey, and no historic-era built environment buildings, structures, or objects were observed.

5.2 RECOMMENDATIONS

Based on the results of this cultural resource study, Æ recommends the following management practices be adopted for the proposed Project.

5.2.1 Cultural Resource Awareness Training

Prior to construction, a professional archaeologist accompanied by a representative from the Santa Rosa Rancheria Tachi-Yokut Tribe (if possible) shall conduct a cultural resource awareness training for all construction personnel working on site during construction. The training shall include an overview of the area's history and potential cultural resources that could be encountered during ground-disturbing activities. The session shall focus on the recognition of types of archaeological resources that could be encountered at the Project site and the procedures to be followed if they are found. The training also shall outline penalties for unauthorized artifact collecting or intentional disturbance of archaeological resources. The qualified archaeologist shall conduct the training prior to the start of ground-disturbing activities of undisturbed land. Documentation shall be retained demonstrating that all construction personnel received the training.

5.2.2 Inadvertent Discovery of Archaeological Resources

If prehistoric or historic-era cultural resources are encountered during Project activities, all ground-disturbing activities within 50 feet of the find shall cease until a qualified archaeologist can evaluate the significance of the resources and recommend appropriate treatment measures. Per CEQA Guidelines Section 15126.4(b)(3)(A), project redesign and preservation in place shall be the preferred means to avoid impacts to significant archaeological sites. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional management practices in consultation with the KCCSD, which may include data recovery or other appropriate measures.

The KCCSD shall consult with appropriate Native American representatives in determining appropriate management practices for unearthed cultural resources if the resources are prehistoric or Native American in nature. Archaeological materials recovered during any investigation shall be curated at Santa Rosa Rancheria, if possible. The qualified archaeologist shall prepare a report documenting evaluation and/or additional management practices of the resource. A copy of the report shall be provided to the KCCSD and to the SSJVIC. Construction can recommence based on direction of the qualified archaeologist and with concurrence from the KCCSD.

5.2.3 Inadvertent Discovery of Unmarked Burials

If human remains are uncovered during Project activities, the Project operator shall immediately halt work within 50 feet of the find, contact the Kings County Coroner to evaluate the remains,

and follow the procedures and protocols set forth in CEQA Guidelines Section 15064.4 (e)(1). If the remains are identified—on the basis of archaeological context, age, cultural associations, or biological traits—as those of a Native American, California Health and Safety Code 7050.5 and PRC 5097.98 require that the coroner notify the NAHC within 24 hours of discovery. The NAHC will then identify the Most Likely Descendant, who will be afforded the opportunity to recommend means for treatment of the human remains following protocols in California PRC 5097.98.

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- 1991 A Distinctive Flaked-Stone Tool Type from Tulare Lake Basin. In *Contributions to Tulare Lake Archaeology I: Background to a Study of Tulare Lake's Archaeological Past*, edited by William J. Wallace and Francis A. Riddell, pp. 53–60. Tulare Lake Archaeological Research Group, Redondo Beach, California.

Siefkin, Nelson

- 1999 *Archaeology of the Redtfeldt Mound (CA-KIN-66), Tulare Basin, California*. Master's thesis, Department of Sociology and Anthropology, California State University, Bakersfield.

Silverstein, Michael

- 1978 Yokuts: Introduction. In *California*, edited by Robert F. Heizer, pp. 446–447. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Vandor, Paul E.

- 1919 *History of Fresno County, California, with Biographical Sketches*. 2 vols. Historic Record Company, Los Angeles, California.

Wallace, William J.

- 1978 Southern Valley Yokuts. In *California*, edited by Robert F. Heizer, pp. 448–461. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

APPENDIX A

Personnel Qualifications

Areas of Expertise

- Cultural resources management
- Prehistoric archaeology of southern California
- Indigenous archaeology and Native American/descendant community coordination
- Federal, state, local environmental laws and regulations
- Training, capacity building
- Traditional Cultural Property and Landscape analysis

Years of Experience

- 24

Education

M.S., Anthropology, focus Archaeology, 2003, University of California, Riverside

B.S., Anthropology, 2000, University of California, Riverside

B.A., Linguistics, 2000, University of California, Riverside

A.A., English, 1996, Long Beach City College

Registrations/Certifications

- Registered Professional Archaeologist 28576661 (current)
- Cultural Consultant, Riverside County #171 (current)

Permits/Licensure

- Field Director, California BLM Statewide Cultural Resources Use Permit CA-18-22

Professional Associations

- Society of California Archaeology

Professional Experience

2023–	Principal Archaeologist, Applied EarthWorks, Inc.
2020–2022	Senior Archaeologist, Applied EarthWorks, Inc.
2017–2023	Senior Ethnoarchaeologist, Cultural Geographics Consulting
2007–2017	Deputy Tribal Historic Preservation Officer, Pechanga Band of Luiseño Mission Indians
2001–2015	Archaeological Assistant, San Bernardino County Coroner
2002–2007	Senior Archaeologist, L&L Environmental, Inc.

Technical Qualifications

Ms. Hoover has more than 24 years of experience in archaeological, cultural, and tribal resource management in southern California, Alta and Baja California, and Yucatan, Mexico. Ms. Hoover has collaborated with governmental agencies, environmental consultants, and indigenous communities to develop sustainable and practical applications for the identification and preservation of archaeological and tribal cultural resources, including landscapes and large, geographical features. As a capable Project Manager, she has coordinated dozens of CRM projects during all phases of development, including managing logistics and communications with various clients, lead agencies, Tribal communities, and project staff. Ms. Hoover is the designated archaeologist of record for three Native American Tribal Historic Preservation Offices (THPOs) in southern California.

Ms. Hoover has authored, co-authored, reviewed, and contributed to hundreds of California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), and National Environmental Policy Act (NEPA) technical reports; Programmatic, Memoranda, and Master Agreements; THPO development applications and associated tribal ordinances and historic preservation guidance; ethnographic studies and National Register of Historic Places eligibility forms; and other compliance and mitigation documents.

Ms. Hoover has presented collaborative projects, personal research, cultural resources education, and environmental regulation guidance trainings to a wide variety of audiences, including topics such as AB 52, SB 18 and CEQA guidance, cultural and tribal consultation best practices, and Tribal Monitoring Program trainings. She has contributed to CalTHPO organizational committees, participated in development of California and Federal archaeological and tribal consultation policies, and contributed to a published book on Tribal GIS applications.

Areas of Expertise

- Cultural resource management
- Prehistoric archaeology
- Project management

Years of Experience

- 30

Education

Ph.D., Anthropology, Southern Methodist University, 2003

M.A., Anthropology, Southern Methodist University, 1995

B.A., Anthropology, University of California, Davis, 1989

Registrations/Certifications

- Register of Professional Archaeologist 15189

Permits/Licensure

- Principal Investigator, California BLM Statewide Cultural Resources Use Permit CA-15-29

Professional Affiliations

- Society for American Archaeology
- Society for California Archaeology

Professional Experience

- | | |
|-----------|--|
| 2021–2023 | Principal Archaeologist Subconsultant for Applied EarthWorks, Inc., Fresno, California |
| 2000–2020 | President (2015–2020), Managing Principal (2015–2020), Regional Manager (2012–2014), Assistant Division Manager (2010–2011), Principal Archaeologist/Project Manager (2016–present), Senior Archaeologist/Project Manager (2000–2015), Applied EarthWorks, Inc., Fresno, California ⁴ |
| 1998–2001 | Adjunct Faculty Member, Fresno City College, Fresno, California |
| 1995–1996 | Staff Archaeologist, Applied EarthWorks, Inc., Fresno, California |
| 1994–1995 | Staff Archaeologist, INFOTEC Research, Inc., Fresno, California |
| 1992–1994 | Teaching Assistant, Southern Methodist University, Dallas, Texas |
| 1989–1991 | Archaeological Project Leader, California Department of Transportation, Sacramento |

Technical Qualifications

Dr. Clark Baloian has been involved in archaeology in California and the western United States since 1987. Her areas of expertise include the prehistory of the San Joaquin Valley, Sierra Nevada, Great Basin, central California coast, and the Iron Age of West Africa. Dr. Baloian has served as Principal Investigator/Project Manager, Field Supervisor, Crew Chief, or Field Technician for projects throughout California, Oregon, Nevada, New Mexico, Texas, Hawaii, and West Africa. Her experience in cultural resource management includes research design, data acquisition, laboratory analysis, and preparation of technical reports and compliance documents; she also has completed the Advisory Council on Historic Preservation course in National Historic Preservation Act (NHPA) Section 106 compliance policies and procedures. Her analytic skills include lithic and ceramic analyses as well as settlement pattern studies and spatial analysis, which were the foci of her doctoral research. As a Principal Archaeologist and subconsultant for Applied EarthWorks, Dr. Baloian provides quality assurance, high-level technical review, CEQA and Section 106 oversight, and overall professional guidance for project work, as needed.

Areas of Expertise

- California archaeology
- Survey, excavation, and site recordation
- Construction monitoring
- Burial excavation and removal
- Working with and coordinating with tribal members
- Lithic technology and trade processes
- Project administrative support

Years of Experience

- 4

Education

B.A., University of California, Santa Cruz, 2019

Registrations/Certifications

- Hazardous Waste Operations and Emergency Response (HAZWOPER) 40-hour Certification, 2021

Professional Experience

- | | |
|-----------|---|
| 2021– | Staff Archaeologist, Applied EarthWorks, Inc., Fresno, California |
| 2019–2021 | Archaeological Field Technician, Far Western Anthropological Research |
| 2019 | Archaeological Field Technician, Albion Environmental |

Technical Qualifications

Mr. Granado's archaeological experience includes survey, monitoring, archaeological testing, data recovery excavation, and documentation of both prehistoric and historical resources throughout California. This work has encompassed prefield research, pedestrian survey, site recording, excavation, and report preparation. Mr. Granado has a basic understanding of Section 106 of the National Historic Preservation Act and associated regulations and processes; he also has experience working with local Native American tribes. Mr. Granado worked as an Archaeological Field Technician for several different firms, gaining experience across California, before joining Applied EarthWorks as a full-time staff archaeologist. In addition to this professional experience, he worked as a lab assistant during his undergraduate studies where he performed lithic debitage analysis and prepared faunal samples for stable isotope analysis. For Applied EarthWorks, Mr. Granado has served first as a technician, working on various surveys and projects such as Tract 920 site testing. Since 2021 he has worked full time as a Staff Archaeologist and has participated in various survey, excavation, and monitoring projects. Mr. Granado has also taken a role in writing technical reports, DPR forms, and proposals. He also serves as Safety Steward for the Fresno Office and manages the office's field equipment inventory.

Areas of Expertise

- Cultural Resource Management
- Archaeological Fieldwork
- ArcGIS
- Database Management
- Curation
- Collections Management
- Cultural Background Research
- Section 106
- Field Coordination
- Tribal Outreach

Years of Experience

- 18

Education

M.A., Anthropology, Western Michigan University, Kalamazoo, Michigan 2005

B.A., Anthropology and History, University of Nebraska-Lincoln, Lincoln, Nebraska 2003

Registrations/Certifications

- Registered Professional Archaeologist 61015544

Professional Experience

2021–	Staff Archaeologist/Project Administrator, Applied EarthWorks, Inc., Fresno, California.
2016-2021	Archaeologist, ERM (Environmental Resources Management), Duluth, Georgia
2014-2016	Lab Director/Archaeologist, NRG (Natural Resources Group), Duluth, Georgia
2011-2012	Curator/Collections Manager, Colorado State University-CEMML (Center for Environmental Management of Military Lands), Fort Campbell, Kentucky
2010-2010	Field Archaeologist, AECOM, Anchorage, Alaska
2010-2010	Laboratory Technician, AECOM, Dubuque, Iowa
2008-2009	Collections Manager, Buffalo Museum of Science, Buffalo, New York
2006-2008	Curator, Center for American Archaeology, Kampsville, Illinois
2003-2005	Teaching Assistant, Western Michigan University, Kalamazoo, Michigan
2004-2005	Section 106 Compliance Clerk, Indiana Dunes National Lakeshore, Porter, Indiana
2002-2003	Archaeological Aid, Midwest Archaeological Center, Lincoln, Nebraska

Technical Qualifications

Ms. Orlowski is a Staff Archaeologist and Project Administrator at Applied EarthWorks with more than 18 years of experience working on archaeological field surveys, testing projects, data-recovery excavations, and site recording throughout the Midwest, Great Lakes, Northeast and Southeast regions, and the Arctic. Jena has also worked in lab, museum, and curatorial settings, performing prehistoric and historic artifact analyses, overseeing collections, creating, and installing exhibits and preparing collections manuals/policies. Her GIS experience includes utilizing ArcMap, ArcGIS Online and is currently being trained on ArcGIS Pro. She has experience in editing and querying GIS data and cartography and visualization. At Applied EarthWorks, some of the tasks Jena has taken on are record search requests, outreach to tribes, writing proposals and creating budgets, authoring/co-authoring reports, applying for permits, creating field schedules, and updating project trackers.

APPENDIX B

Records Search Results

*Archaeological site locations are exempt from the California Public Records Act, as specified in Government Code 6254.10, and from the Freedom of Information Act (Exemption 3), under the legal authority of both the NHPA (PL 89-665, as amended, Section 304[a]) and the Archaeological Resources Protection Act (PL 96-95, Section 9[a]).



4/24/2023

Milo Honsberger
Applied EarthWorks, Inc.
1391 W. Shaw Ave., Suite C
Fresno, CA 93711

Re: KCCSD New Groundwater Well
Records Search File No.: 23-137

The Southern San Joaquin Valley Information Center received your record search request for the project area referenced above, located on the Kettleman City, Los Viejos USGS 7.5' quads. The following reflects the results of the records search for the project area and the 0.5 mile radius:

As indicated on the data request form, the locations of archaeological resources and reports are provided in the following format: ☐ custom GIS maps ☒ GIS data

Resources within project area:	None
Resources within 0.5 mile radius:	P-16-000266
Reports within project area:	KI-00054, 00226, 00238, 00269
Reports within 0.5 mile radius:	KI-00005, 00048, 00141, 00143, 00199, 00271

Resource Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Resource Database Printout (details): ☒ enclosed ☐ not requested ☐ nothing listed

Resource Digital Database Records: ☒ enclosed ☐ not requested ☐ nothing listed

Report Database Printout (list): ☒ enclosed ☐ not requested ☐ nothing listed

Report Database Printout (details): ☐ enclosed ☒ not requested ☐ nothing listed

Report Digital Database Records: ☒ enclosed ☐ not requested ☐ nothing listed

Resource Record Copies: ☒ enclosed ☐ not requested ☐ nothing listed

Report Copies: ☐ enclosed ☒ not requested ☐ nothing listed

OHP Built Environment Resources Directory: ☒ enclosed ☐ not requested ☐ nothing listed

Archaeological Determinations of Eligibility: ☐ enclosed ☐ not requested ☒ nothing listed

CA Inventory of Historic Resources (1976): ☐ enclosed ☐ not requested ☒ nothing listed

Caltrans Bridge Survey: Not available at SSJVIC; please see
<https://dot.ca.gov/programs/environmental-analysis/cultural-studies/california-historical-bridges-tunnels>

Ethnographic Information: Not available at SSJVIC

Historical Literature: Not available at SSJVIC

Historical Maps: Not available at SSJVIC; please see
<http://historicalmaps.arcgis.com/usgs/>

Local Inventories: Not available at SSJVIC

GLO and/or Rancho Plat Maps: Not available at SSJVIC; please see
<http://www.glorerecords.blm.gov/search/default.aspx#searchTabIndex=0&searchByTypeIndex=1> and/or
<http://www.oac.cdlib.org/view?docId=hb8489p15p;developer=local;style=oac4;doc.view=items>

Shipwreck Inventory: Not available at SSJVIC; please see
<https://www.slc.ca.gov/shipwrecks/>

Soil Survey Maps: Not available at SSJVIC; please see
<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>

Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Invoices for Information Center services will be sent under separate cover from the California State University, Bakersfield Accounting Office.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,



Jeremy E David
Assistant Coordinator

Resource List

SSJVIC Record Search 23-137

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-16-000266	CA-KIN-000108H	Resource Name - California Aqueduct; OTIS Resource Number - 653828	Structure	Historic	AH06; HP19; HP20	2011 (Patricia Ambacher, AECOM); 2012 (Pamela Daly, Daly & Associates); 2016 (Randy Baloian, Applied EarthWorks, Inc.); 2020 (H. Winzenried, C. Ehringer, Environmental Science Associates)	KI-00196, KI-00221, KI-00222, KI-00223, KI-00224, KI-00226, KI-00299, KI-00337, KI-00349

Report List

SSJVIC Record Search 23-137

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
KI-00005	NADB-R - 1141247	1990	Bissell, Ronald M.	Cultural Resources Reconnaissance of the Proposed Kettleman Landfill, Expansion of the Hanford Landfill, Treee Transfer Stations and Access Roads, Kings County, California.	RMW Paleo Associates, Incorporated.	16-000070, 16-000071
KI-00048	Submitter - Job #94-069	1994	Gerry, Robert A.	Cultural Resources Assessment of Two Proposed 38-Unit Apartment Complexes in Kettleman City, Kings County, California	Peak and Associates, Inc.	
KI-00054		1975	Varner, Dudley	Kettleman City Wastewater Collection Project	MaGlasson and Associates, Consulting Engineers	
KI-00141	Submitter - Application No. 01-04-012	2001	Unknown	Los Banos-Gates 500 kV Transmission Project Draft Supplemental Environmental Impact Report (Cultural Resources Section)	Aspen Environmental Group	
KI-00143	Caltrans - 06-KIN-41 KP 18.5/31.3 (PM 11.5/20.1) EA 06-415900	2003	Gassner, Sarah	Extended Phase I Excavation Proposal for the Kettleman City Rehabilitation Project, Kings County California	Central California Cultural Resources Branch, Caltrans	
KI-00143A		2004	Gassner, Sarah	Extended Phase I Excavation Report Kettleman City Rehabilitation Project Kings County, California	Central California Cultural Resources Branch, Caltrans	
KI-00199		2010	Kaijankoski, Philip	Gates-Tulare Lake Reconductoring Project	Far Western Anthropological Research Group, Inc.	
KI-00226		2012	Daly, Pamela	Historic Resources Assessment Report for Kettleman City Surface Water Treatment Plant Project Kettleman City, Kings County, CA	Sanberg Group, Inc.	16-000266
KI-00238		2010	Meyer, Jack, Young, D. Craig, and Rosenthal, Jeffrey	Volume I: A Geoarchaeological Overview and Assessment of Caltrans Districts 6 and 9 - Cultural Resources Inventory of Caltrans District 6/9 Rural Conventional Highways - EA 06-0A7408 TEA Grant	Far Western Anthropological Research Group, Inc.	
KI-00238A		2010	Meyer, Jack, Young, D. Craig, and Rosenthal, Jeffrey S.	Volume II: Appendices A Georchaeological Overview and Assessment of Caltrans District 6 and 9 - Cultural Resources Inventory of Caltrans District 6/9 Rural Conventional Highways - EA06-0A7408 TEA Grant	Far Western Anthropological Research Group, Inc.	
KI-00269		2015	Schiffman, Robert A.	Archaeological Evaluation of Areas Selected for Possible Nuclear Power Plants by the LADWP	Bakersfield College	

Report List

SSJVIC Record Search 23-137

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
KI-00271		1987	Peak & Associates	Report on the Cultural Resources Assessment of the Proposed San Joaquin Valley Pipeline	Peak and Associates	

Historical Maps and Aerial Imagery Reviewed

Date	Name	Author	Reference	Notes
1958		Historical Aerials by Netronline; www.historicaerials.com	1958 aerial; accessed June 11, 2023	Project area is vacant land south of established Kettleman city. Interstate 5 does not exist.
1962		Historical Aerials by Netronline; www.historicaerials.com	1962 aerial; accessed June 11, 2023	Project area is still vacant land south of town. CA-41 in current alignment. Interstate 5 does not exist.
1984		Historical Aerials by Netronline; www.historicaerials.com	1984 aerial; accessed June 11, 2023	No change to Project area; California Aqueduct is in place; Interstate 5 is present.
2020		Historical Aerials by Netronline; www.historicaerials.com	2020 aerial; accessed June 11, 2023	Surface Water Treatment Plant is visible (was not visible in 2018 aerial).
1933	Kettleman City, CA 1:62,500	U.S. Geological Survey	1933 Kettleman, CA. 1:62,500 scale. U.S. National Geologic Map Database, Historical Topographic Map Collection (topo View), https://ngmdb.usgs.gov/topoview/ , accessed June 11, 2023.	Kettleman City is labeled on map. Blakely Canal is also in place. No development other than Kettleman residential area.
1940	Stratford, CA 1:62,500	U.S. Geological Survey	1942, Stratford, CA. 1:62,500 scale. U.S. National Geologic Map Database, Historical Topographic Map Collection (topo View), https://ngmdb.usgs.gov/topoview/ , accessed June 11, 2023.	Kettleman City is labeled on map. Blakely Canal is also in place. No development other Kettleman residential area.
2018 - Present		Google Earth	Google Earth Imagery from 12/30/1985 to 5/7/2023 Google Earth pro, accessed June 11, 2023.	Land is vacant from 1985 until July 2018 at which time it appears the Surface Water Treatment Plant is under construction or recently installed.
1937	1937 13-ABJ 43-24	Agricultural Adjustment Administration	1937 Fresno County, California, Aerial Survey No. 1937 13-ABJ 43-24, http://http://digitized.library.fresnostate.edu/cdm/singleitem/collection/aerial/id/761 , accessed through Map and Aerial Locator Tool (MALT), Henry Madden Library, California State University, Fresno, accessed June 11, 2023.	Land is vacant south of Kettleman City at Project area location.
1992	1992 BR-CVHAB 9-9	Agricultural Adjustment Administration	1992 Fresno County, California, Aerial Survey No. 1992 BR-CVHAB 9-9, http://http://http://digitized.library.fresnostate.edu/cdm/singleitem/collection/aerial/id/761 , accessed through Map and Aerial Locator Tool (MALT), Henry Madden Library, California State University, Fresno, accessed June 11, 2023.	virtually no change since 1937 aerial except for addition of California Aqueduct. Still no development in Project Area.
1854	Original Survey CA-Mound Diablo 22 south 19 East	General Land Office	https://glorerecords.blm.gov/details/survey/default.aspx?dm_id=379794&sid=g1edx4wl.m4z&surveyDetailsTabIndex=1#surveyDetailsTabIndex=0 , accessed June 11, 2023.	Shows Project Section (Northwest corner of Section 19) relative to Tulare Lake Bed
1889	Original Survey CA-Mound Diablo 22 south 19 East	General Land Office	https://glorerecords.blm.gov/details/survey/default.aspx?dm_id=379798&sid=g1edx4wl.m4z&surveyDetailsTabIndex=1 , accessed June 11, 2023.	Shows Project Section (Northwest corner of Section 19) relative to Tulare Lake Bed

APPENDIX C

Native American Outreach

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission

1550 Harbor Boulevard, Suite 100

West Sacramento, CA 95691

916-373-3710

916-657-5390 – Fax

nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Date: 4/13/2023

Project:

County: Kings

USGS Quadrangle Name:

Township: 22S

Range: 18E/19E

Section(s): 13, 18, 19, 24

Company/Firm/Agency: Applied EarthWorks, Inc.

Contact Person: Milo Honsberger

Street Address: 1391 W. Shaw Ave., Suite C

City: Fresno

Zip: 93711

Phone: (559) 229-1856 x

Fax: (559) 229-2019

Email: mhonsberger@appliedearthworks.com

Project Description:

The KCCSD intends to construct a new groundwater well within their existing treatment plant, generally between 4th Street and California State Route 41, southwest of the city of Kettleman. The Project area is an existing treatment facility and the ground surface has been previously disturbed; however, as installation of a new well is proposed, a cultural resource study is required. As part of the CEQA review process, Summers Engineering, on behalf of the KCCSD as lead agency, has requested a cultural resources study be conducted for the Project.



NATIVE AMERICAN HERITAGE COMMISSION

May 19, 2023

Milo Honsberger
Applied EarthWorks, IncVia Email to: mhonsberger@appliedearthworks.com

Re: 4492 KCCSD Project, Kings County

Dear Mr. Honsberger:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information submitted for the above referenced project. The results were positive. Please contact the Tribes on the attached list for information. Please note that tribes do not always record their sacred sites in the SLF, nor are they required to do so. A SLF search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with a project's geographic area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites, such as the appropriate regional California Historical Research Information System (CHRIS) archaeological Information Center for the presence of recorded archaeological sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. Please contact all of those listed; if they cannot supply information, they may recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

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 lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Cameron.vela@nahc.ca.gov.

Sincerely,

*Cameron Vela*Cameron Vela
Cultural Resources Analyst

Attachment

CHAIRPERSON
Laura Miranda
LuiseñoVICE CHAIRPERSON
Reginald Pagaling
ChumashSECRETARY
Sara Dutschke
MiwokCOMMISSIONER
Isaac Bojorquez
Ohlone-CostanoanCOMMISSIONER
Buffy McQuillen
Yokayo Pomo, Yuki,
NomlakiCOMMISSIONER
Wayne Nelson
LuiseñoCOMMISSIONER
Stanley Rodriguez
KumeyaayCOMMISSIONER
[Vacant]COMMISSIONER
[Vacant]EXECUTIVE SECRETARY
**Raymond C.
Hitchcock**
Miwok/NisenanNAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

**Native American Heritage Commission
Native American Contact List
Kings County
5/19/2023**

**Kings River Choinumni Farm
Tribe**

Stan Alec,
3515 East Fedora Avenue Foothill Yokut
Fresno, CA, 93726
Phone: (559) 647 - 3227

**Wuksache Indian Tribe/Eshom
Valley Band**

Kenneth Woodrow, Chairperson
1179 Rock Haven Ct. Foothill Yokut
Salinas, CA, 93906 Mono
Phone: (831) 443 - 9702
kwood8934@aol.com

**Salinan Tribe of Monterey, San
Luis Obispo Counties**

Patti Dunton, Tribal Administrator
7070 Morro Road, Suite A Salinan
Atascadero, CA, 93422
Phone: (805) 464 - 2650
info@salinantribe.com

Xolon-Salinan Tribe

Karen White, Chairperson
P.O. Box 7045 Salinan
Spreckels, CA, 93962
Phone: (831) 455 - 1012
xolon.salinan.heritage@gmail.com

**Santa Rosa Rancheria Tachi
Yokut Tribe**

Leo Sisco, Chairperson
P.O. Box 8 Southern Valley
Lemoore, CA, 93245 Yokut
Phone: (559) 924 - 1278
Fax: (559) 924-3583

Xolon-Salinan Tribe

Penny Hurt, Cultural Preservation
Administrator
P.O. Box 7045 Salinan
Spreckels, CA, 93962
Phone: (805) 453 - 3675
phurt6700@gmail.com

Tule River Indian Tribe

Neil Peyron, Chairperson
P.O. Box 589 Yokut
Porterville, CA, 93258
Phone: (559) 781 - 4271
Fax: (559) 781-4610
neil.peyron@tulerivertribe-nsn.gov

Tule River Indian Tribe

Kerri Vera, Environmental
Department
P. O. Box 589 Yokut
Porterville, CA, 93258
Phone: (559) 783 - 8892
Fax: (559) 783-8932
kerri.vera@tulerivertribe-nsn.gov

Tule River Indian Tribe

Joey Garfield, Tribal Archaeologist
P. O. Box 589 Yokut
Porterville, CA, 93258
Phone: (559) 783 - 8892
Fax: (559) 783-8932
joey.garfield@tulerivertribe-
nsn.gov

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 Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed 4492 KCCSD Project, Kings County.



1391 W. Shaw Ave., Suite C
Fresno, CA 93711-3600
O: (559) 229-1856 | F: (559) 229-2019
www.appliedearthworks.com

May 25, 2023

Kings River Choinumni Farm Tribe
3515 East Fedora Avenue
Fresno, Ca, 93726
(559) 647-3227
Transmitted via USPS

RE: Kettleman City Community Services District (KCCSD) New Groundwater Well in Kings County, California

Dear To Whom It May Concern,

Applied EarthWorks, Inc. (Æ) is currently preparing an archaeological study in support of the proposed construction of a new groundwater well within an existing treatment plant boundaries. The treatment plant is generally between 4th Street and California State Route 41, southwest of the city of Kettleman in Kings County, CA.

The project area is an existing treatment facility and the ground was previously disturbed during construction of the plant, facilities installation, and asphalt surface pavement. However, as installation of a new well is proposed, a cultural resource study is required. On behalf of KCCSD, Æ is conducting Native American outreach and performing other tasks related to cultural resource management. The project is subject to the requirements of the California Environmental Quality Act and, as lead agency, KCCSD is responsible for any formal government-to-government consultation required.

The project area is 0.15-acre APN 042-100-103-000 as shown on the Kettleman City and Los Viejos 7.5-minute U.S. Geological Survey topographic quadrangle (see enclosed map). Æ- has conducted the field survey and identified no cultural resources as the surface of the new well area is currently paved. Æ also surveyed outside the existing fenced facilities and did not identify any surface cultural resources.

Æ has requested a sacred lands file search from the Native American Heritage Commission. The results were received on May 19, 2023 and indicated a positive result. Your name and address were provided to us by the NAHC as someone who may have additional information and/or concerns about the project. If you have information about sacred or special sites in the area or if you have any interest in the project, please email/phone me or send a letter to my attention. Your comments will be included in our cultural resource report. You can contact me during normal business hours (559-229-1856 ext. 121) or via email at nsaenz@appliedearthworks.com if you have any questions or need additional information.

Sincerely,

Nicole Saenz, M.S.
Field Technician

encl.: Project Map



Jena Orlowski <jorlowski@appliedearthworks.com>

Kettleman City Community Services District (KCCSD) New Groundwater Well in Kings County, CA

From: **Samantha McCarty** <SMcCarty@tachi-yokut-nsn.gov>
Date: Fri, Jun 9, 2023 at 1:47 PM
Subject: Kettleman City Community Services District (KCCSD) New Groundwater Well in Kings County, CA
To: nsaenz@appliedearthworks.com <nsaenz@appliedearthworks.com>
Cc: Shana Powers <SPowers@tachi-yokut-nsn.gov>, Nichole Escalon <nescalon@tachi-yokut-nsn.gov>

Dear Nicole,

Thank you for contacting the Santa Rosa Rancheria Tachi-Yokut Tribe regarding: Kettleman City Community Services District (KCCSD) New Groundwater Well in Kings County, CA. We would like to request a meeting to discuss this project further. If you have any questions, comments, and or concerns please contact myself or the Santa Rosa Rancheria Cultural Department. Thank you.

Sincerely,

Samantha McCarty

Santa Rosa Rancheria Tachi-Yokut Tribe

Cultural Specialist II

SMcCarty@tachi-yokut-nsn.gov

Office: (559) 924-1278 x 4091

Cell: (559) 633-6640

***PLEASE KEEP ALL CULTURAL STAFF IN EMAILS UNLESS STATED OTHERWISE**



Jena Orlowski <jorlowski@appliedearthworks.com>

Kettleman City Community Services Distric New Groundwater Well project outreach2 messages

Jena Orlowski <jorlowski@appliedearthworks.com>
To: phurt6700@gmail.com

Mon, Jun 5, 2023 at 6:03 PM

Hello Penny,

Applied EarthWorks, Inc. (Æ) is currently providing cultural resource services for a cultural study at 4th Street and California State Route 41, southwest of the city of Kettleman in Kings County, California. The project area is an existing treatment facility and the ground was previously disturbed during construction of the plant, facilities installation, and asphalt surface pavement. However, as installation of a new well is proposed, a cultural resource study is required. The Project area is depicted on the attached copy of the Kettleman City and Los Viejos, CA 7.5' Quadrangle Map and is within section 19 of Township 22S, Range 13, 18, 19 and 24E.

We sent out a formal letter addressed to you on May 25, 2023. This email is to just follow up to make sure you are notified in case you didn't receive the formal letter. If you have information regarding the project area, please call or email to my attention. Your comments will be included in our cultural resources study report.

Please call or email me at (770) 545-5245 or jorlowski@appliedearthworks.com if you have any questions or require additional information. Thank you for your time and consideration.

Sincerely,
Jena Orlowski

Jena Orlowski, MA, RPA (61015544) | Applied EarthWorks, Inc.**Staff Archaeologist / Project Administrator**1391 W. Shaw Ave., Suite C
Fresno, CA 93711-3600

Cell 770-545-5245

jorlowski@appliedearthworks.com**NA Letter-portrait_24K.pdf**
1003K

Penny Pierce Hurt <phurt6700@gmail.com>

Mon, Jun 5, 2023 at 7:50 PM

To: Jena Orlowski <jorlowski@appliedearthworks.com>, Karen White <xolon.salinan.heritage@gmail.com>

Hello Jean,
I confirmed with our council chair that this is outside our homelands. Thank you for including us.

Penny Pierce Hurt
Cultural Preservation Facilitator
Xolon Salinan Tribe

[Quoted text hidden]

--

Penny Pierce Hurt, Elder
Cultural Resource Facilitator

Native American Outreach Log for the KCCSD New Groundwater Well Project

Kings River Choinumni Farm Tribe	Stan Alec		05/25/23		06/05/23	Phone disconnected; letter returned. Do not have current contact info
Salinan Tribe of Monterey, San Luis Obispo Counties	Patti Dunton	Tribal Administrator	5/25/2023	06/05/23		No Response to date.
Santa Rosa Rancheria Tachi Yokut Tribe	Leo Sisco	Chairperson	5/25/2023		06/05/23	On 6/5/2023 AE left voicemail. On 6/9/2023 AE received an email from Samantha McCarty requesting a meeting. On 6/13/2023 AE's Project Manager (Anna Hoover) spoke with Shana Powers on the phone. The Tribe is requesting formal AB 52 consultation with the KCCSD. They are also requesting cultural sensitivity training for onsite personnel prior to any drilling or ground disturbance as well as an inadvertent discovery mitigation measure.
Tule River Indian Tribe	Neil Peyron	Chairperson	05/25/23	06/05/23		No Response to date.
Tule River Indian Tribe	Joey Garfield	Tribal Archaeologist	05/25/23	06/05/23		No Response to date.
Wuksache Indian Tribe/Eshom Valley Band	Kenneth Woodrow	Chairperson	05/25/23	06/05/23		No Response to date.
Xolon-Salinan Tribe	Karen White	Chairperson	05/25/23	06/05/23		No Response to date.
Xolon-Salinan Tribe	Penny Hurt	Cultural Preservation Administrator	05/25/23	06/05/23		Response 6/5/2023. The project area is outside of their homelands.